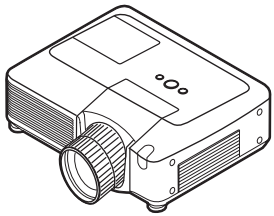
Projector

CP-WUX645N

User's Manual (detailed) – Operating Guide



Thank you for purchasing this projector.

⚠**WARNING** ►Before using this product, please read the "User's Manual - Safety Guide" and related manuals to ensure the proper use of this product. After reading them, store them in a safe place for future reference.

About this manual

Various symbols are used in this manual. The meanings of these symbols are described below.

⚠**WARNING** This symbol indicates information that, if ignored, could possibly result in personal injury or even death due to incorrect handling.

⚠**CAUTION** This symbol indicates information that, if ignored, could possibly result in personal injury or physical damage due to incorrect handling.

🕮 Please refer to the pages written following this symbol.

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HITACHI
Inspire the Next

Read this Safety Guide first.

Projector

User's Manual - Safety Guide

Thank you for purchasing this projector.

WARNING • Before using, read these user's manuals of this projector to ensure correct usage through understanding. After reading, store them in a safe place for future reference. Incorrect handling of this product could possibly result in personal injury or physical damage. The manufacturer assumes no responsibility for any damage caused by mishandling that is beyond normal usage defined in these manuals of this projector.

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About The Symbols

Various symbols are used in this manual, the user's manual and on the product itself to ensure correct usage, to prevent danger to the user and others, and to prevent property damage. The meanings of these symbols are described below. It is important that you read these descriptions thoroughly and fully understand the contents.

WARNING	This symbol indicates information that, if ignored, could possibly result in personal injury or even death due to incorrect handling.
CAUTION	This symbol indicates information that, if ignored, could result possibly in personal injury or physical damage due to incorrect handling.

Typical Symbols

This symbol indicates an additional warning (including cautions). An illustration is provided to clarify the contents.

This symbol indicates a prohibited action. The contents will be clearly indicated in an illustration or nearby (the symbol to the left indicates that disassembly is prohibited).

This symbol indicates a compulsory action. The contents will be clearly indicated in an illustration or nearby (the symbol to the left indicates that the power plug should be disconnected from the power outlet).

Safety Precautions

⚠ WARNING

Never use the projector if a problem should occur.

Abnormal operations such as smoke, strange odor, no image, no sound, excessive sound, damaged casing or elements or cables, penetration of liquids or foreign matter, etc. can cause a fire or electrical shock.

In such case, immediately turn off the power switch and then disconnect the power plug from the power outlet. After making sure that the smoke or odor has stopped, contact your dealer. Never attempt to make repairs yourself because this could be dangerous.

Disconnect the plug from the power outlet.

• The power outlet should be close to the projector and easily accessible.

Use special caution for children and pets.

Incorrect handling could result in fire, electrical shock, injury, burn or vision problem.

Use special caution in households where children and pets are present.

Do not insert liquids or foreign object.

Penetration of liquids or foreign objects could result in fire or electrical shock. Use special caution in households where children are present.

If liquids or foreign object should enter the projector, immediately turn off the power switch, disconnect the power plug from the power outlet and contact your dealer.

• Do not place the projector near water (ex. a bathroom, a beach, etc.).

• Do not expose the projector to rain or moisture. Do not place the projector outdoors.

• Do not place flower vases, pots, cups, cosmetics, liquids such as water, etc on or around the projector.

• Do not place metals, combustibles, etc on or around the projector.

• To avoid penetration of foreign objects, do not put the projector into a case or bag together with any thing except the accessories of the projector, signal cables and connectors.

Never disassemble and modify.

The projector contains high voltage components. Modification and/or disassembly of the projector or accessories could result in fire or electrical shock.

Do not disassemble.

• Never open the cabinet.

• Ask your dealer to repair and clean insider.

Do not give the projector any shock or impact.

If the projector should be shocked and/or broken, it could result in an injury, and continued use could result in fire or electrical shock.

If the projector is shocked, immediately turn off the power switch, disconnect the power plug from the power outlet and contact your dealer.

Do not place the projector on an unstable surface.

If the projector should be dropped and/or broken, it could result in an injury, and continued use could result in fire or electrical shock.

• Do not place the projector on an unstable, slant or vibrant surface such as a wobbly or inclined stand.

• Use the caster brakes placing the projector on a stand with casters.

• Do not place the projector in the side up position, the lens up position or the lens down position.

• In the case of a ceiling installation or the like, contact your dealer before installation.

Safety Precautions (continued)

⚠ WARNING

Be cautious of High temperatures of the projector.
High temperatures are generated when the lamp is lit. It could result in fire or burn. Use special caution in households where children are present.
Do not touch about the lens, air fans and ventilation openings during use or immediately after use, to prevent a burn. Take care of ventilation.
• Keep a space of 30 cm or more between the sides and other objects such as walls.
• Do not place the projector on a metallic table or anything weak in heat.
• Do not place anything about the lens, air fans and ventilation openings of the projector.
• Never block the air fan and ventilation openings.
• Do not cover the projector with a tablecloth, etc.
• Do not place the projector on a carpet or bedding.

Never look through the lens or openings when the lamp is on.
The powerful light could adversely affect vision.
Use special caution in households where children are present.

Use only the correct power cord and the correct power outlet.
Incorrect power supply could result in fire or electrical shock.
• Use only the correct power outlet depending on the indication on the projector and the safety standard.
• The enclosed power cord must be used depending on the power outlet to be used.

Be cautious of the power cord connection.
Incorrect connection of the power cord could result in fire or electrical shock.
• Do not touch the power cord with a wet hand.
• Check that the connecting portion of the power cord is clean (with no dust), before using. Use a soft and dry cloth to clean the power plug.
• Insert the power plug into a power outlet firmly. Avoid using a loose, unsound outlet or contact failure.

Be sure to connect with ground wire.
Connect the ground terminal of AC inlet of this unit with the ground terminal provided at the building using the correct power cord; otherwise, fire or electric shock can result.
• Don’t take the core of power cord away.

Surely connect the ground wire.

Safety Precautions (continued)

⚠ WARNING

Be careful in handling the light source lamp.

The projector uses a high-pressure mercury glass lamp made of glass. The lamp can break with a loud bang, or burn out. When the bulb bursts, it is possible for shards of glass to fly into the lamp housing, and for gas containing mercury to escape from the projector's vent holes.

Please carefully read the section "Lamp".

Be careful in handling the power cord and external connection cables.

If you keep using a damaged the power cord or cables, it can cause a fire or electrical shock. Do not apply too much heat, pressure or tension to the power cord and cables.

If the power cord or cables is damaged (exposed or broken core wires, etc.), contact your dealer.

• Do not place the projector or heavy objects on the power cord and cables. Also, do not place a spread, cover, etc, over them because this could result in the inadvertent placing of heavy objects on the concealed power cord or cables.

• Do not pull the power cord and cables. When connecting and disconnecting the power cord or cables, do it with your hand holding the plug or connector.

• Do not place the cord near the heater.

• Avoid bending the power cord sharply.

• Do not attempt to work on the power cord.

Be careful in handling the battery of the remote control.

Incorrect handling of the battery could result in fire or personal injury. The battery may explode if not handled properly.

• Keep the battery away from children and pets. If swallowed consult a physician immediately for emergency treatment.

• Do not allow the battery in a fire or water.

• Avoid fire or high-temperature environment.

• Do not hold the battery with the metallic tweezers.

• Keep the battery in a dark, cool and dry play.

• Do not short circuit the battery.

• Do not recharge, disassemble or solder the battery.

• Do not give the battery a physical impact.

• Use only the battery specified in the other manual of this projector.

• Make sure the plus and minus terminals are correctly aligned when loading the battery.

• If you observe a leakage of the battery, wipe out the flower and then replace the battery. If the flower adheres your body or clothes, rinse well with water.

• Obey the local laws on disposing the battery.

Safety Precautions (continued)

⚠ CAUTION

Be careful in moving the projector.
Neglect could result in an injury or damage.
• Do not move the projector during use. Before moving, disconnect the power cord and all external connections, and close the slide lens door or attach the lens cap.
• Avoid any impact or shock to the projector.
• Do not drag the projector.
• For moving the projector, use the enclosed case or bag if provided.

Do not put anything on top of the projector.
Placing anything on the projector could result in loss of balance or falling, and cause an injury or damage. Use special caution in households where children are present.

Do not attach anything other than specified things to the projector.
Neglect could result in an injury or damage.
• Some projector has a screw thread in a lens part. Do not attach anything other than specified options (such as conversion lens) to the screw thread.

Avoid a smoky, humid or dusty place.
Placing the projector in a smoke, a highly humid, dusty place, oily soot or corrosive gas could result in fire or electrical shock.
• Do not place the projector near a smoky, humid or dusty place (ex. a smoking space, a kitchen, a beach, etc.). Do not place the projector outdoors.
• Do not use a humidifier near the projector.

Take care of the air filter to normal ventilate.
The air filter should be cleaned periodically. If the air filter becomes clogged by dust or the like, internal temperature rises and could cause malfunction. The projector may display the message such as “CHECK THE AIR FLOW” or turn off the projector, to prevent the internal heat level rising.
• When the indicators or a message prompts you to clean the air filter, clean the air filter as soon as possible.
• If the soiling will not come off the air filter, or it becomes damaged, replace the air filter.
• Use the air filter of the specified type only. Please order the air filter specified in the other manual of this projector to your dealer.
• When you replace the lamp, replace also the air filter. The air filter may be attached when you buy a replacement lamp for this projector.
• Do not turn on the projector without air filter.

Avoid a high temperature environment.
The heat could have adverse influence on the cabinet of the projector and other parts. Do not place the projector, the remote control and other parts in direct sunlight or near a hot object such as heater, etc.

Avoid Magnetism.
Manufacture strongly recommends to avoid any magnetic contact that is not shielded or protected on or near the projector itself. (ie.,. Magnetic Security Devices, or other projector accessory that contains magnetic material that has not been provided by the manufacture etc.) Magnetic objects may cause interruption of the projector's internal mechanical performance which may interfere with cooling fans speed or stopping, and may cause the projector to completely shut down.

Safety Precautions (continued)

⚠ CAUTION

Remove the power cord for complete separation.

Disconnect the plug from the power outlet.

• For safety purposes, disconnect the power cord if the projector is not to be used for prolonged periods of time.
• Before cleaning, turn off and unplug the projector. Neglect could result in fire or electrical shock.

Ask your dealer to cleaning inside of the projector about every year.

Accumulations of dust inside the projector cause result in fire or malfunction. Cleaning inside is more effective if performed before every humid periods such as rainy season.
• Do not clean inside yourself because it is dangerous.

NOTE

Do not give the remote control any physical impact.
A physical impact could cause damage or malfunction of the remote control.
• Take care not to drop the remote control.
• Do not place the projector or heavy objects on the remote control.

Take care of the lens.
• Close the slide lens door or attach the lens cap to prevent the lens surface being scratched when the projector is not used.
• Do not touch the lens to prevent fog or dirt of the lens that cause deterioration of display quality.
• Use commercially available lens tissue to clean the lens (used to clean cameras, eyeglasses, etc.). Be careful not to scratch the lens with hard objects.

Take care of the cabinet and the remote control.
Incorrect care could have adverse influence such as discoloration, peeling paint, etc.
• Use a soft cloth to clean the cabinet and control panel of the projector and the remote control. When excessively soiled dilute a neutral detergent in water, wet and wring out the soft cloth and afterward wipe with a dry soft cloth. Do not use undiluted detergent directly.
• Do not use an aerosol sprays, solvents, volatile substances or abrasive cleaner.
• Before using chemical wipes, be sure to read and observe the instructions.
• Do not allow long-term close contact with rubber or vinyl.

About bright spots or dark spots.
Although bright spots or dark spots may appear on the screen, this is a unique characteristic of liquid crystal displays, and such do not constitute or imply a machine defect.

Be careful of printing of the LCD panel.
If the projector continues projecting a still image, inactive images or 16:9 aspect images in case of 4:3 panel, etc., for long time, the LCD panel might possibly be printed.

Safety Precautions (continued)

NOTE

About consumables.
Lamp, LCD panels, polarizors and other optical components, and air filter and cooling fans have a different lifetime in each. These parts may need to be replaced after a long usage time.
• This product isn't designed for continuous use of long time. In the case of continuous use for 6 hours or more, or use for 6 hours or more every day (even if it isn't continuous), or repetitious use, the lifetime may be shortened, and these parts may need to be replaced even if one year has not passed since the beginning of using.
• Any inclining use beyond the adjustment range explained in these user's manuals may shorten the lifetimes of the consumables.

Before turning on the power, make the projector cool down adequately.
After turning the projector off, pushing the restart switch or interrupting of the power supply, make the projector cool down adequately. Operation in a high temperature state of the projector causes a damage of the electrode and un-lighting of the lamp.

Avoid strong rays.
Any strong ray (such as direct rays of the sun or room lighting) onto the remote control sensors could invalidate the remote control.

Avoid radio interference.
Any interfering radiation could cause disordered image or noises.
• Avoid radio generator such as a mobile telephone, transceiver, etc. around the projector.

About displaying characteristic.
The display condition of the projector (such as color, contrast, etc.) depends on characteristic of the screen, because the projector uses a liquid crystal display panel. The display condition can differ from the display of CRT.
• Do not use a polarized screen. It can cause red image.

Turn the power on/off in right order.
To prevent any trouble, turn on/off the projector in right order mentioned below unless specifying.
• Power on the projector before the computer or video tape recorder.
• Power off the projector after the computer or video tape recorder.

Take care not to fatigue your eyes.
Rest the eyes periodically.

Set the sound volume at a suitable level to avoid bothering other people.
• It is better to keep the volume level low and close the windows at night to protect the neighborhood environment.

Connecting with notebook computer
When connecting with notebook computer, set to valid the RGB external image output (setting CRT display or simultaneous display of LCD and CRT).
Please read instruction manual of the notebook for more information.

Lamp

⚠ WARNING

HIGH VOLTAGE

HIGH TEMPERATURE

HIGH PRESSURE

The projector uses a high-pressure mercury glass lamp. The lamp can **break with a loud bang, or burn out,** if jolted or scratched, handled while hot, or worn over time. Note that each lamp has a different lifetime, and some may burst or burn out soon after you start using them. In addition, when the bulb bursts, it is possible for **shards of glass** to fly into the lamp housing, and for **gas containing mercury** to escape from the projector's vent holes.

About disposal of a lamp • This product contains a mercury lamp; do not put in trash. Dispose of in accord with environmental laws.
For lamp recycling, go to www.lamprecycle.org. (in USA)
For product disposal, contact your local government agency or www.eiae.org (in the US) or www.epsc.ca (in Canada).
For more information, call your dealer.

Disconnect the plug from the power outlet

• If the lamp should break (it will make a loud bang when it does), unplug the power cord from the outlet, and make sure to request a replacement lamp from your local dealer. Note that shards of glass could damage the projector's internals, or cause injury during handling, so please do not try to clean the projector or replace the lamp yourself.
• If the lamp should break (it will make a loud bang when it does), ventilate the room well, and make sure not to breathe the gas that comes out of the projector vents, or get it in your eyes or mouth.
• Before replacing the lamp, make sure the power switch is off and the power cable is not plugged in, then wait at least 45 minutes for the lamp to cool sufficiently. Handling the lamp while hot can cause burns, as well as damaging the lamp.

• Do not open the lamp cover while the projector is suspended from above. This is dangerous, since if the lamp's bulb has broken, the shards will fall out when the cover is opened. In addition, working in high places is dangerous, so ask your local dealer to have the lamp replaced even if the bulb is not broken.
• Do not use the projector with the lamp cover removed. At the lamp replacing, make sure that the screws are screwed in firmly. Loose screws could result in damage or injury.

• Use the lamp of the specified type only.
• If the lamp breaks soon after the first time it is used, it is possible that there are electrical problems elsewhere besides the lamp. If this happens, contact your local dealer or a service representative.
• Handle with care: jolting or scratching could cause the lamp bulb to burst during use.
• Using the lamp for long periods of time, could cause it dark, not to light up or to burst. When the pictures appear dark, or when the color tone is poor, please replace the lamp as soon as possible. Do not use old (used) lamps; this is a cause of breakage.

Regulatory Notices

FCC Statement Warning

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

WARNING: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

INSTRUCTIONS TO USERS: This equipment complies with the requirements of FCC (Federal Communication Commission) equipment provided that the following conditions are met. Some cables have to be used with the core set. Use the accessory cable or a designated-type cable for the connection. For cables that have a core only at one end, connect the core to the projector.

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

For the Customers in CANADA

NOTICE: This Class B digital apparatus complies with Canadian ICES-003.

Warranty And After-Service

Unless seen any abnormal operations (mentioned with the first paragraph of WARNING in this manual), when a problem occurs with the equipment, first refer to the "Troubleshooting" section of the "Operating Guide", and run through the suggested checks. If this does not resolve the problem contact your dealer or service company. They will tell you what warranty condition is applied.

Contents

About this manual. 1
Contents 2
Projector features. 3
Preparations 3
Contents of package 3
Lens cover attachment and removal . . . 3
Part names 4
Projector 4
Control panel. 5
Rear panel 5
Remote control 6
Setting up 7
Arrangement 8
Adjusting the projector's elevator . . . 9
Using the security bar and slot 9
Connecting your devices. 10
Connecting power supply 12
Remote control 13
Laser pointer. 13
Installing the batteries. 13
About the remote control signal . . . 14
Changing the frequency of remote control signal . 14
Using as a wired remote control . . . 15
Using as a simple PC mouse & keyboard 15
Power on/off 17
Turning on the power 17
Turning off the power 17
Operating 18
Adjusting the volume. 18
Temporarily muting the sound. 18
Selecting an input signal. 18
Searching an input signal 19
Selecting an aspect ratio. 19
Adjusting the zoom and focus. 20
Adjusting the lens shift 20
Using the automatic adjustment feature. . 20
Adjusting the position 21
Correcting distortion 21
Using the magnify feature. 23
Freezing the screen 23
Temporarily blanking the screen . . . 24
PbyP (Picture by Picture) 25
Using the menu function 26
EASY MENU. 27
Aspect, Auto keystone execute, Keystone, Keystone, Perfect fit, Picture mode, Brightness, Contrast,
(EASY MENU continued . . . . . 28)
Color, Tint, Sharpness, Whisper, Mirror, Reset, Filter time, Language, Go to Advanced Menu...
PICTURE Menu 29
Brightness, Contrast, Gamma, Color temp, Color, Tint, Sharpness, Active iris, My memory
IMAGE Menu 32
Aspect, Over scan, V position, H position, H phase, H size, Auto adjust execute
INPUT Menu 34
Progressive, Video NR, 3D-YCS, Color space, Component, Video format, HDMI, Frame lock, RGB in, Resolution
SETUP Menu 38
Auto keystone execute, Keystone, Keystone, Perfect fit, Whisper, Mirror, Monitor out
AUDIO Menu 41
Volume, Treble, Bass, Speaker, Audio, HDMI audio
SCREEN Menu 42
Language, Menu position, Blank, Start up, My Screen, My Screen Lock, Message, Source name,Template
OPTION Menu 47
Auto search, Auto keystone, Auto on, Auto off, Lamp time, Filter time, My button, My source, Service, Security
NETWORK Menu 60
Setup, Projector name, My image, Information, Service
C.C. (Closed Caption) Menu. . . 65
Display, Mode, Channel
Maintenance 66
Lamp. 66
Air filter 68
Internal clock battery. 69
Other care. 70
Troubleshooting 71
Related messages 71
Regarding the indicator lamps 72
Phenomena that may be easy to be mistaken for machine defects. . 74
Warranty and after-service. . . 77
Specifications **77**

Projector features

This projector has a capability to project various picture signals onto a screen. This projector requires only a minimal amount of space for installation and can produce a large projected image from even a short distance. Moreover, the projector has the following features to extend its potentiality for broad use.

- ✓ The WUXGA (1920x1200) native resolution can support Widescreen PCs to realize your original images on a screen.
- ✓ The HDMI port can support various image equipment which have digital interface to get clearer pictures on a screen.

Preparations

Contents of package

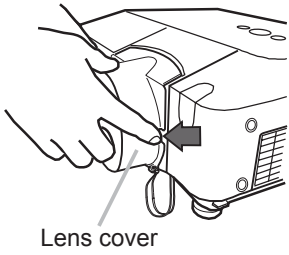
Please see the “Contents of package” in the “User’s Manual (concise)” which is a book. Your projector should come with the items shown there. Contact immediately your dealer if anything is missing.

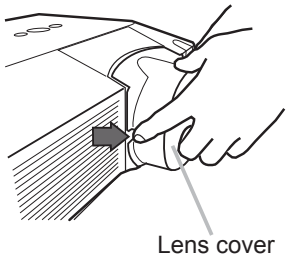
NOTE • Keep the original packing materials for future reshipment. Be sure to use the original packing materials when moving the projector. Use special caution for the lens.

Lens cover attachment and removal

• Remove lens cover before using the projector.
• Attach the lens cover as shown in the figure when the projector is not in use.

⚠**WARNING** ►If the projector is bumped against a wall or other object without the lens cover in place, the projector could malfunction.

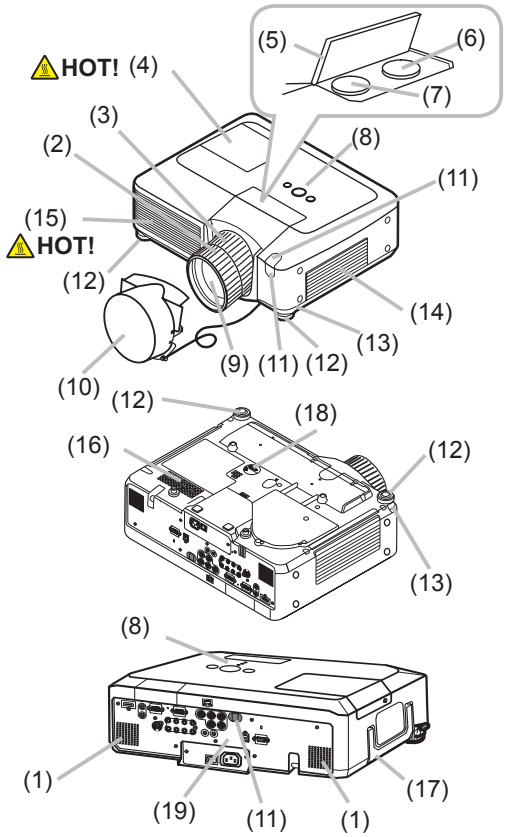




Part names

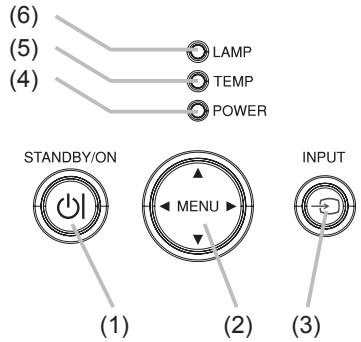
Projector

(1) Speakers (x 2) (📖41)
(2) Focus ring (📖20)
(3) Zoom ring (📖20)
(4) Lamp cover (📖66)
The lamp unit is inside.
(5) Lens shift cover (📖20)
(6) Horizontal lens shift dial (📖20)
(7) Vertical lens shift dial (📖20)
(8) Control panel (📖5)
(9) Lens (📖70)
(10) Lens cover (📖3)
(11) Remote sensors (x 3) (📖14)
(12) Elevator feet (x 2) (📖9)
(13) Elevator knobs (x 2) (📖9)
(14) Filter cover (📖68)
The air filter and intake vent are inside.
(15) Exhaust vents
(16) Intake vents
(17) Handle
(18) Battery cover (📖69)
(19) Rear panel (📖5)



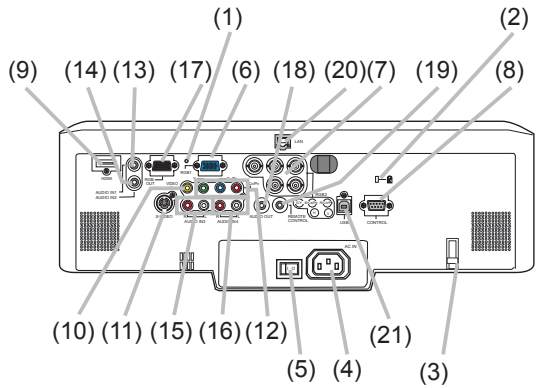
⚠**WARNING** ►**HOT!** : Do not touch around the lamp cover and the exhaust vents during use or just after use, since it is too hot.
►Do not look into the lens or vents while the lamp is on, since the strong light is not good for your eyes.
►Do not grab the front cover to hold the projector up, since the projector may drop down.
►Do not handle the elevator knobs without holding the projector, since the projector may drop down.
⚠**CAUTION** ►Maintain normal ventilation to prevent the projector from heating up. Do not cover, block or plug up the vents. Do not place anything that can stick or be sucked to the vents, around the intake vents. Clean the air filter periodically.

Control panel



(1) STANDBY/ON button (*17*)
(2) MENU button (*26*)
It consists of four cursor buttons.
(3) INPUT button (*18*)
(4) POWER indicator (*17, 72*)
(5) TEMP indicator (*72*)
(6) LAMP indicator (*72*)

Rear panel

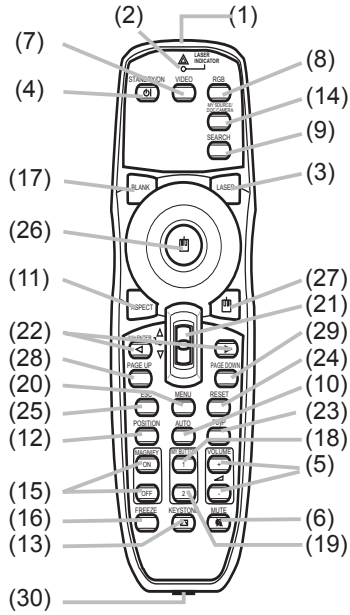


(1) Shutdown switch (*74*)
(2) Security slot (*9*)
(3) Security bar (*9*)
(4) AC IN (AC inlet) (*12*)
(5) Power switch (*17*)
(6) RGB1 port (*10*)
(7) RGB2(G/Y, B/C_B/P_B, R/C_R/P_R, H, V) port (*10*)
(8) CONTROL port (*10*)
(9) HDMI port (*10*)
(10) VIDEO port (*10*)
(11) S-VIDEO port (*10*)
(12) COMPONENT (Y, C_B/P_B, C_R/P_R) ports (*10*)
(13) AUDIO IN1 port (*10*)
(14) AUDIO IN2 port (*10*)
(15) AUDIO IN3 (R/L) ports (*10*)
(16) AUDIO IN4 (R/L) ports (*10*)
(17) RGB OUT port (*10*)
(18) AUDIO OUT port (*10*)
(19) REMOTE CONTROL port (*10*)
(20) LAN port (*10*)
(21) USB port (*10*)

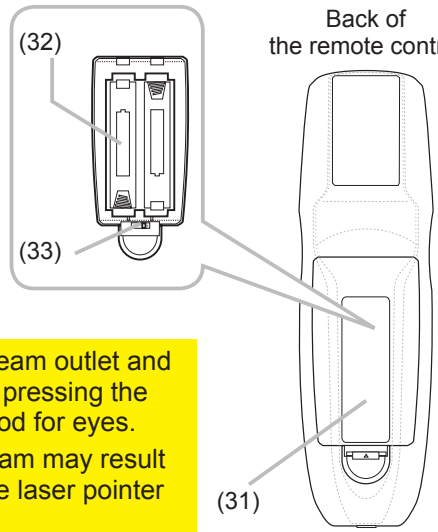
⚠**WARNING** ►Do not use the security bar and the security slot to prevent the projector from falling down, since it is not designed for it.

⚠**CAUTION** ►Use the shutdown switch only when the projector is not turned off by normal procedure, since pushing this switch stops operation of the projector without cooling it down.

Remote control



(1) Laser pointer (📖*13*)
It is a beam outlet.
(2) LASER INDICATOR (📖*13*)
(3) LASER button (📖*13*)
(4) STANDBY/ON button (📖*17*)
(5) VOLUME+/- buttons (📖*18*)
(6) MUTE button (📖*18*)
(7) VIDEO button (📖*19*)
(8) RGB button (📖*18*)
(9) SEARCH button (📖*19*)
(10) AUTO button (📖*20*)
(11) ASPECT button (📖*19*)
(12) POSITION button (📖*21*)
(13) KEYSTONE button (📖*21*)
(14) MY SOURCE/DOC.CAMERA button (📖*19*)
(15) MAGNIFY - ON/- OFF buttons (📖*23*)
(16) FREEZE button (📖*23*)
(17) BLANK button (📖*24*)
(18) MY BUTTON - 1 button (📖*49*)
(19) MY BUTTON - 2 button (📖*49*)
(20) MENU button (📖*26*)
(21) Lever switch (📖*26*) : acting 3 functions as below.
Cursor button ▲ : to slide toward the side marked ▲.
Cursor button ▼ : to slide toward the side marked ▼.
ENTER button : to push down the center point.
(22) Cursor buttons ◄/► (📖*26*)
(23) PbyP button (📖*25*)
(24) RESET button (📖*26*)
(25) ESC button (📖*26*)
(26) Mouse left button (📖*15*)
(27) Mouse right button (📖*15*)
(28) PAGE UP button (📖*15*)
(29) PAGE DOWN button (📖*15*)
(30) Wired remote control port (📖*15*)
(31) Battery cover (📖*13*)
(32) Battery holder (📖*13*)
(33) Frequency switch (📖*14*)



⚠**WARNING** ►Do not look into the beam outlet and point the beam at people and pets while pressing the LASER button, since the beam is not good for eyes.

⚠**CAUTION** ►Note that the laser beam may result in hazardous radiation exposure. Use the laser pointer only for pointing on the screen.

Setting up

Install the projector according to the environment and manner the projector will be used in.

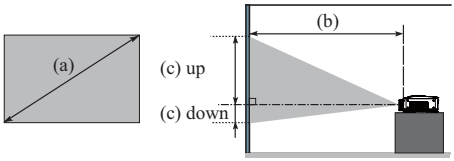
⚠**WARNING** ►Place the projector in a stable horizontal position. If the projector falls or is knocked over, it could cause injury and/or damage to the projector. Using a damaged projector could then result in fire and/or electric shock.
• Do not place the projector on an unstable, slanted or vibrational surface such as a wobbly or inclined stand.
• Do not place the projector on its side, front or rear position.
• Consult with your dealer before a special installation such as suspending from a ceiling.
►Place the projector in a cool place, and ensure that there is sufficient ventilation. The high temperature of the projector could cause fire, burns and/or malfunction of the projector.
• Do not place or attach anything that would block the lens or vent holes.
• Keep a space of 30 cm or more between the sides of the projector and other objects such as walls.
• Do not place the projector on metallic thing or anything weak in heat.
• Do not place the projector on carpet, cushions or bedding.
• Do not place the projector in direct sunlight or near hot objects such as heaters.
• Do not place anything near the projector lens or vents, or on top of the projector.
• Do not place anything that may be sucked into or stick to the vents on the bottom of the projector. This projector has some intake vents also on the bottom.
►Do not place the projector anyplace where it may get wet. Getting the projector wet or inserting liquid into the projector could cause fire, electric shock and/or malfunction of the projector.
• Do not place the projector in a bathroom or the outdoors.
• Do not place anything containing liquid near the projector.
►Do not place the projector where any oils, such as cooking or machine oil, are used.

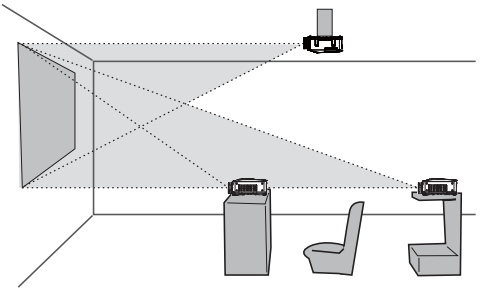
⚠**CAUTION** ►Avoid placing the projector in smoky, humid or dusty place. Placing the projector in such places could cause fire, electric shock and/or malfunction of the projector.
• Do not place the projector near humidifiers, smoking spaces or a kitchen. Also do not use an ultrasonic humidifier near the projector. Otherwise chlorine and minerals contained in tap water are atomized and could be deposited in the projector causing image degradation or other problems.
►Position the projector to prevent light from directly hitting the projector's remote sensor.

Arrangement

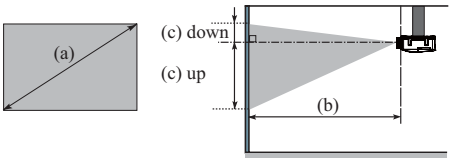
Refer to the illustrations and tables below to determine screen size and projection distance. The values shown in the table are calculated for a full size screen: 1920×1200
(a) Screen size (diagonal)
(b) Projection distance (±10%)
(c) Screen height (±10%), when the vertical lens shift (📖*20*) is set full upward.

On a horizontal surface





Suspended from the ceiling

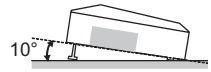


• Keep a space of 30 cm or more between the sides of the projector and other objects such as walls.
• Consult with your dealer before a special installation such as suspending from a ceiling.

(a) Screen size [inch (m)]	16:10 screen				4:3 screen			
	(b) Projection distance [m (inch)]		(c) Screen height [cm (inch)]		(b) Projection distance [m (inch)]		(c) Screen height [cm (inch)]	
	min.	max.	down	up	min.	max.	down	up
30 (0.8)	0.9 (37)	1.9 (75)	0 (0)	40 (16)	1.1 (42)	2.1 (84)	0 (0)	46 (18)
40 (1.0)	1.3 (49)	2.5 (100)	0 (0)	54 (21)	1.4 (56)	2.9 (113)	0 (0)	61 (24)
60 (1.5)	1.9 (75)	3.8 (150)	0 (0)	81 (32)	2.2 (85)	4.3 (170)	0 (0)	91 (36)
70 (1.8)	2.2 (87)	4.4 (175)	0 (0)	94 (37)	2.5 (99)	5.0 (198)	0 (0)	107 (42)
80 (2.0)	2.5 (100)	5.1 (200)	0 (0)	108 (42)	2.9 (113)	5.8 (227)	0 (0)	122 (48)
90 (2.3)	2.9 (113)	5.7 (225)	0 (0)	121 (48)	3.2 (128)	6.5 (255)	0 (0)	137 (54)
100 (2.5)	3.2 (125)	6.4 (250)	0 (0)	135 (53)	3.6 (142)	7.2 (283)	0 (0)	152 (60)
120 (3.0)	3.8 (150)	7.6 (300)	0 (0)	162 (64)	4.3 (170)	8.6 (340)	0 (0)	183 (72)
150 (3.8)	4.8 (188)	9.5 (376)	0 (0)	202 (79)	5.4 (213)	10.8 (426)	0 (0)	229 (90)
200 (5.1)	6.4 (252)	12.7 (501)	0 (0)	269 (106)	7.2 (285)	14.4 (568)	0 (0)	305 (120)
250 (6.4)	8.0 (315)	15.9 (627)	0 (0)	337 (132)	9.1 (356)	18.0 (710)	0 (0)	381 (150)
300 (7.6)	9.6 (378)	19.1 (752)	0 (0)	404 (159)	10.9 (428)	21.6 (852)	0 (0)	457 (180)
350 (8.9)	11.2 (441)	22.3 (878)	0 (0)	471 (185)	12.7 (499)	25.2 (994)	0 (0)	533 (210)

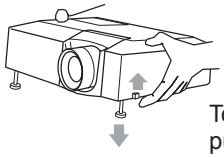
Adjusting the projector's elevator

When the place to put the projector is slightly uneven to the left or right, use the elevator feet to place the projector horizontally.
Using the feet can also tilt the projector in order to project at a suitable angle to the screen, elevating the front side of the projector within 10 degrees.

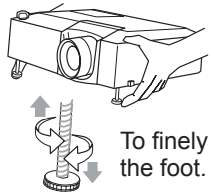


This projector has 2 elevator feet and 2 elevator knobs. An elevator foot is adjustable while pulling up the elevator knob on the same side as it.

1. Holding the projector, pull the elevator knobs up to loose the elevator feet.
2. Position the front side of the projector to the desired height.
3. Release the elevator knobs in order to lock the elevator feet.
4. After making sure that the elevator feet are locked, put the projector down gently.
5. If necessary, the elevator feet can be manually twisted to make more precise adjustments. Hold the projector when twisting the feet.



To loose an elevator foot, pull up the elevator knob on the same side as it.

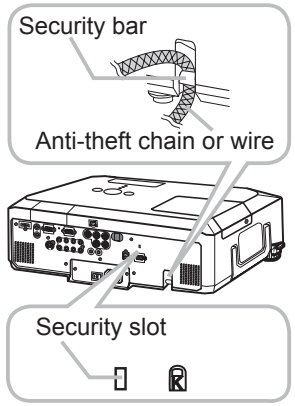


To finely adjust, twist the foot.

⚠**CAUTION** ►Do not handle the elevator knobs without holding the projector, since the projector may drop down.
►Do not tilt the projector other than elevating its front within 10 degrees using the adjuster feet. A tilt of the projector exceeding the restriction could cause malfunction or shortening the lifetime of consumables, or the projector itself.

Using the security bar and slot

A commercial anti-theft chain or wire up to 10 mm in diameter can be attached to the security bar on the projector.
Also this product has the security slot for the Kensington lock.
For details, see the manual of the security tool.

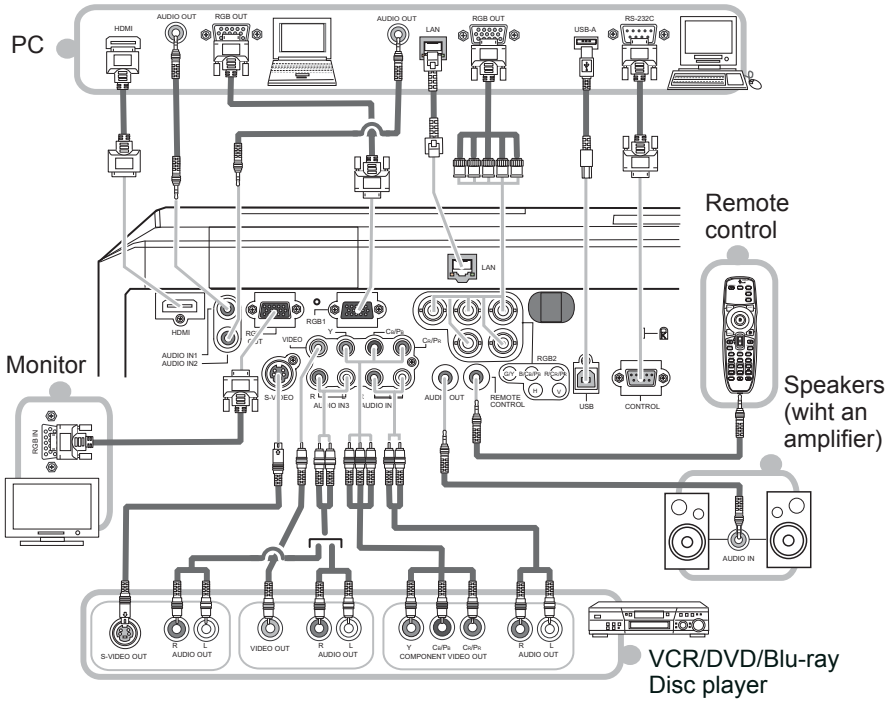


⚠**WARNING** ►Do not use the security bar and the security slot to prevent the projector from falling down, since it is not designed for it.

NOTE • The security bar and the security slot are not comprehensive theft prevention measures. They are intended to be used as supplemental theft prevention measure.

Connecting your devices

Be sure to read the manuals for devices before connecting them to the projector. Make sure that all the devices are suitable to be connected with this product, and prepare the cables required to connect.
Please refer to the following illustrations to connect them.



⚠**WARNING** ►Do not disassemble or modify the projector.
►Be careful not to damage the cables, and do not use damaged cables.

⚠**CAUTION** ►Turn off all devices and unplug their power cords prior to connecting them to projector. Connecting a live device to the projector may generate extremely loud noises or other abnormalities that may result in malfunction or damage to the device and the projector.
►Use appropriate accessory or designated cables. Ask your dealer about non-accessory cables which may be required a specific length or a ferrite core by the regulations. For cables with a core only at one end, connect the end with the core to the projector.
►Make sure that devices are connected to the correct ports. An incorrect connection may result in malfunction or damage to the device and the projector.

Connecting your devices (continued)

NOTE • Be sure to read the manuals for devices before connecting them to the projector, and make sure that all the devices are suitable to be connected with this product. Before connecting to a PC, check the signal level, the signal timing, and the resolution.
- Be sure to consult to the administrator of the network. Do not connect LAN port to any network that might have the excessive voltage.
- Some signal may need an adapter to input this projector.
- Some PCs have multiple screen display modes that may include some signals which are not supported by this projector.
- Although the projector can display signals with resolution up to WUXGA (1920X1200), the signal will be converted to the projector's panel resolution before being displayed. The best display performance will be achieved if the resolutions of the input signal and the projector panel are identical.

• While connecting, make sure that the shape of the cable's connector fits the port to connect with. And be sure to tighten the screws on connectors with screws.
• When connecting a laptop PC to the projector, be sure to activate the PC's external RGB output. (Set the laptop PC to CRT display or to simultaneous LCD and CRT display.) For details on how this is done, please refer to the instruction manual of the corresponding laptop PC.
• When the picture resolution is changed on a computer depending on an input, automatic adjustment function may take some time and may not be completed. In this case, you may not be able to see a check box to select "Yes/No" for the new resolution on Windows. Then the resolution will go back to the original. It might be recommended to use other CRT or LCD monitors to change the resolution.
• In some cases, this projector may not display a proper picture or display any picture on screen. For example, automatic adjustment may not function correctly with some input signals. An input signal of composite sync or sync on G may confuse this projector, so the projector may not display a proper picture.
• The HDMI port of this model is compatible with HDCP (High-bandwidth Digital Content Protection) and therefore capable of displaying a video signal from HDCP compatible DVD players or the like.

About Plug-and-Play capability

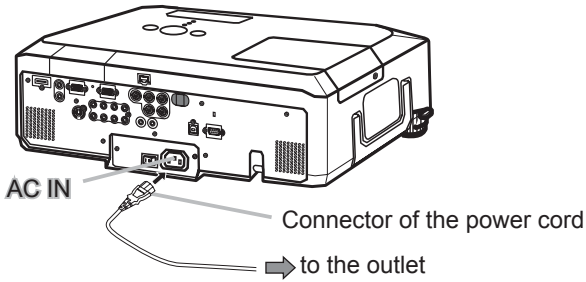
Plug-and-Play is a system composed of a computer, its operating system and peripheral equipment (i.e. display devices). This projector is VESA DDC 2B compatible. Plug-and-Play can be used by connecting this projector to a computer that is VESA DDC (display data channel) compatible.
• Take advantage of this feature by connecting an RGB cable to the RGB1 port (DDC 2B compatible). Plug-and-Play may not work properly if any other type of connection is attempted.
• Please use the standard drivers in your computer as this projector is a Plug-and-Play monitor.

NOTE for HDMI

• The HDMI supports the following signals.
-Video signal : 480i@60,480p@60,576i@50,720p@50/60,1080i@50/60,1080p@50/60
-PC signals : See User's Manual (detailed) Technical
-Audio signal : Format Linear PCM
Sampling Frequency 48kHz / 44.1kHz / 32kHz
• This projector can be connected with another equipment that has HDMI or DVI connector, but with some equipment the projector may not work properly, something like no video or no audio.
• Be sure to use an HDMI cable that has the HDMI logo.
• When the projector is connected with a device having DVI connector, use a DVI to HDMI cable to connect with the HDMI input and an audio cable to connect with one of the AUDIO input.

Connecting power supply

1. Connect the connector of the power cord to the AC IN (AC inlet) of the projector.
2. Firmly plug the power cord's plug into the outlet.

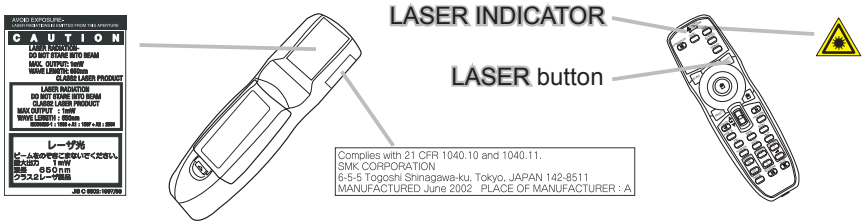


⚠**WARNING** ►Please use extra caution when connecting the power cord, as incorrect or faulty connections may result in fire and/or electrical shock.
• Only use the power cord that came with the projector. If it is damaged, contact your dealer to get a new one.
• Only plug the power cord into an outlet whose voltage is matched to the power cord. The power outlet should be close to the projector and easily accessible. Remove the power cord for complete separation.
• Never modify the power cord.

Remote control

Laser pointer

This remote control has a laser pointer in place of a finger or rod. The laser beam works and the LASER INDICATOR lights while the LASER button is pressed.

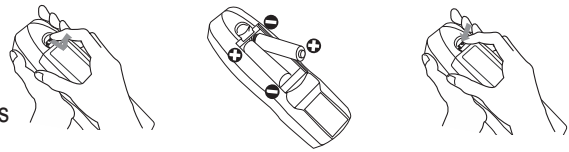

LASER INDICATOR
LASER button
CAUTION
Complies with 21 CFR 1040.10 and 1040.11.
SMK CORPORATION
6-6-5 Togoshi Shinagawa-ku, Tokyo, JAPAN 142-8511
MANUFACTURED June 2002 PLACE OF MANUFACTURER : A

⚠**WARNING** ►The laser pointer of the remote control is used in place of a finger or rod. Never look directly into the laser beam outlet or point the laser beam at other people. The laser beam can cause vision problems.

⚠**CAUTION** ►Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Installing the batteries

Please insert the batteries before using the remote control. If the remote control starts to malfunction, replace the batteries. If you will not use the remote control for an extended period, remove the batteries from the remote control and store them in a safe place.



1. Slide back and remove the battery cover in the direction of the arrow.
2. Align and insert the two AA batteries **(HITACHI MAXELL, Part No.LR6 or R6P)** according to their plus and minus terminals as indicated in the remote control.
3. Replace the battery cover in the direction of the arrow and snap it back into place.

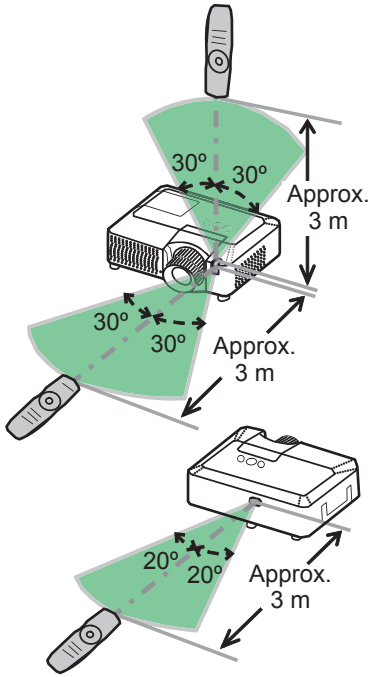
⚠**WARNING** ►Always handle the batteries with care and use them only as directed. Improper use may result in battery explosion, cracking or leakage, which could result in fire, injury and/or pollution of the surrounding environment.
• Be sure to use only the batteries specified. Do not use batteries of different types at the same time. Do not mix a new battery with used one.
• Make sure the plus and minus terminals are correctly aligned when loading a battery.
• Keep a battery away from children and pets.
• Do not recharge, short circuit, solder or disassemble a battery.
• Do not place a battery in a fire or water. Keep batteries in a dark, cool and dry place.
• If you observe battery leakage, wipe out the leakage and then replace a battery. If the leakage adheres to your body or clothes, rinse well with water immediately.
• Obey the local laws on disposing the battery.

About the remote control signal

The remote control works with the projector's remote sensors. This projector has three remote sensors on the front, on the top, and on the back.
The sensors can be respectively turned active or inactive using the "REMOTE RECEIV." in the SERVICE item of OPTION Menu (📖51). Each sensor senses the signal within the following range when the sensor is active.

The front and top sensors:
60 degrees (30 degrees to the left and right of the sensor) within 3 meters about.

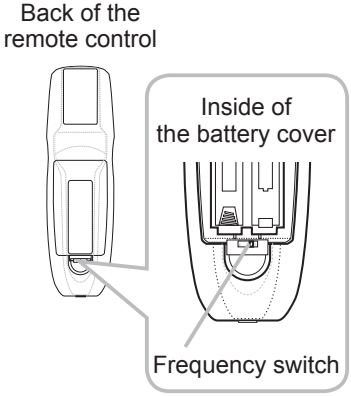
The back sensor:
40 degrees (20 degrees to the left and right of the sensor) within 3 meters about.



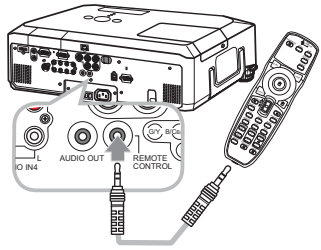
NOTE • The remote control signal reflected in the screen or the like may be available. If it is difficult to send the signal to the sensor directly, attempt to make the signal reflect.
• The remote control uses infrared light to send signals to the projector (Class 1 LED), so be sure to use the remote control in an area free from obstacles that could block the remote control's signal to the projector.
• The remote control may not work correctly if strong light (such as direct sun light) or light from an extremely close range (such as from an inverter fluorescent lamp) shines on the remote sensor of the projector. Adjust the position of projector avoiding those lights.

Changing the frequency of remote control signal

The accessory remote control has the choice of the mode 1 or the mode 2, in the frequency of its signal. If the remote control does not function properly, attempt to change the signal frequency. Please remember that the "REMOTE FREQ." in SERVICE item of OPTION Menu (📖51) of the projector to be controlled should be set to the same mode as the remote control.
To set the mode of the remote control, slide the knob of the frequency switch inside the battery cover into the position indicated by the mode number to choose.



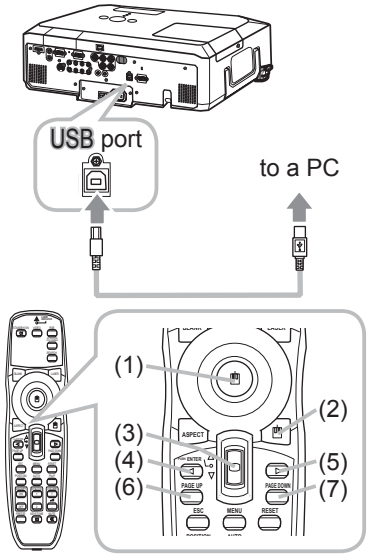
Using as a wired remote control



The accessory remote control works as a wired remote control, when the wired control port at the bottom of the remote control connects with the REMOTE CONTROL port on the back of the projector via an audio cable with 3.5 diameter stereo mini plugs. When the remote control signal is hard to reach surely to the projector in the environment, this function is effective.

NOTE • To connect the remote control with the projector, use an audio cable with 3.5 diameter stereo mini plugs.

Using as a simple PC mouse & keyboard



The accessory remote control works as a simple mouse and keyboard of the PC, when the projector's USB port(B type) connect with the PC's USB port(A type) via a USB cable.

(1) Mouse left button
Pushing the button into the center point works instead of clicking the mouse's left button.
Tilting this button to one of eight directions moves the PC's move pointer on the screen in the direction.

(2) Mouse right button
Pressing the button works instead of clicking the mouse's right button.

(3) Lever switch
Sliding toward the side marked ▲ works instead of the [↑] key on the keyboard. Sliding toward the side marked ▼ works instead of the [↓] key on the keyboard.

(4) Cursor button ◄
This button works instead of the [←] key on the keyboard.

(5) Cursor button ►
This button works instead of the [→] key on the keyboard.

(6) PAGE UP button
This button works instead of the PAGE UP key on the key board.

(7) PAGE DOWN button
This button works instead of the PAGE DOWN key on the key board.

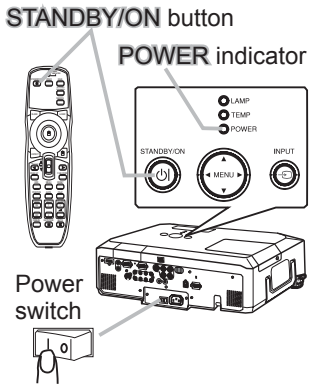
NOTE • When the simple mouse & keyboard function of this product does not work correctly, please check the following.
- When a USB cable connects this projector with a PC having a built-in pointing device (e.g. track ball) like a notebook PC, open BIOS setup menu, then select the external mouse and disable the built-in pointing device, because the built-in pointing device may have priority to this function.
- Windows 95 OSR 2.1 or higher is required for this function. And also this function may not work depending on the PC's configurations and mouse drivers.
- Operating simultaneously two or more keys is void except for mouse drag and drop operation.
- This function is activated only when the projector is working properly.

Using as a simple PC mouse & keyboard (continued)

NOTE • This function is not available in any of the following cases:
- While the lamp is warming up. (The POWER indicator blinks in green.)
- While displaying BLANK (24), TEMPLATE (46) or MY IMAGE (63) screen.
- When any menu is displayed on the screen.
- While using the cursor buttons to operate the sound or screen functions such as adjusting the sound volume, correcting the keystone, correcting the picture position and magnifying the screen.

• Improper use of the simple mouse & keyboard function could damage your equipment. While using this function, please connect this product only to a computer. Be sure to check your computer's manuals before connecting this product to the computer.

Power on/off



Turning on the power

1. Make sure that the power cord is firmly and correctly connected to the projector and the outlet.
2. Remove the lens cover, and set the power switch to the ON position (marked " I ").
   The POWER indicator will light up in steady orange (📖72). Then wait several seconds because the buttons may not function for these several seconds.
3. Press the STANDBY/ON button on the projector or the remote control.

The projection lamp will light up and the POWER indicator will begin blinking in green. When the power is completely on, the indicator will stop blinking and light in steady green.
To display the picture, select an input signal according to the section "Selecting an input signal" (📖18, 19).

Turning off the power

1. Press the STANDBY/ON button on the projector or the remote control.
   The message "Power off?" will appear on the screen for about 5 seconds.
2. Press the STANDBY/ON button on the projector or the remote control again while the message appears.
   The projector lamp will go off, and the POWER indicator will begin blinking in orange. Then the POWER indicator will stop blinking and light in steady orange when the lamp cooling is complete.
3. Make sure that the POWER indicator lights in steady orange, and set the power switch to the OFF position (marked "O").
   The POWER indicator will go off. Attach the lens cover.

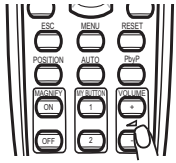
Do not turn the projector on for 10 minutes or more after turning it off. Also, do not turn the projector off shortly after turning it on. Such operations might cause the lamp to malfunction or shorten the lifetime of some parts including the lamp.

⚠**WARNING** ►A strong light is emitted when the projector's power is on. Do not look into the lens of the projector or look inside of the projector through any of the projector's openings.
►Do not touch around the lamp cover and the exhaust vents during use or just after use, since it is too hot.

NOTE • Turn the power on/off in right order. Please power on the projector prior to the connected devices. Power off the projector later than the connected devices.
• When the AUTO ON of the OPTION Menu is set to the TURN ON, and the power was turned off by the power switch last time, turning the power switch on makes the projection lamp light on without pushing the STANDBY/ON button (📖47).
• Use the shutdown switch (📖74) only when the projector is not turned off by normal procedure.

Operating

Adjusting the volume



1. Use the VOLUME + / VOLUME - buttons to adjust the volume.
   A dialog will appear on the screen to aid you in adjusting the volume.If you do not do anything, the dialog will automatically disappear after a few seconds.

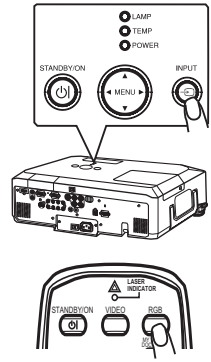
- When 🔇 is selected for current picture input port, the volume adjustment is disabled. Please see AUDIO item of AUDIO Menu (📖*41*).
- When the projector is in the standby mode, the volume can be adjusted if 🔇 is not selected for the AUDIO OUT STANDBY of AUDIO (📖*41*).

Temporarily muting the sound

1. Press MUTE button on the remote control.
   A dialog will appear on the screen indicating that you have muted the sound.
   To restore the sound, press the MUTE, VOLUME + or VOLUME - button. Even if you do not do anything, the dialog will automatically disappear after a few seconds.

- When 🔇 is selected for current picture input port, the sound is always muted. Please see AUDIO item of AUDIO Menu (📖*41*).
- When the sound is muted while a signal from VIDEO(NTSC), S-VIDEO(NTSC) or COMPONENT(480i@60) port is selected, the C.C. (Closed Caption) is automatically activated if the DISPLAY item of the C.C. Menu is set to AUTO and the input signal supports the C.C. feature (📖*65*).

Selecting an input signal



1. Press the INPUT button on the projector.
   Each time you press the button, the projector switches its input from the current port as below.

   → RGB 1 → RGB 2 → HDMI
   ↵ VIDEO ← S-VIDEO ← COMPONENT (Y, C_B/P_B, C_R/P_R) ←

1. Press the RGB button on the remote control to select an input port for the RGB signal.
   Each time you press the button, the projector switches its RGB input from the current port as below.

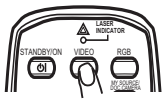
   → RGB 1 → RGB 2 → HDMI →

- While TURN ON is selected for AUTO SEARCH item in OPTION Menu, the projector will keep checking every port sequentially till aninput signal is detected (📖*47*). If RGB button is pushed when VIDEO, S-VIDEO or COMPONENT port is selected, the projector will check RGB1 port first.

(continued on next page)

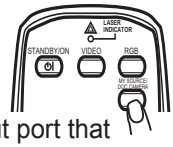
Selecting an input signal (continued)

1. Press the VIDEO button on the remote control to select an input for video signal.
   Each time you press the button, the projector switches its video input port as below.
   COMPONENT (Y, C_B/P_B, C_R/P_R) → S-VIDEO → VIDEO



● While TURN ON is selected for AUTO SEARCH item in OPTION Menu, the projector will keep checking every port sequentially till an input signal is detected (📖*47*). If VIDEO button is pushed when RGB 1 or RGB 2 port is selected, the projector will check COMPONENT port first.

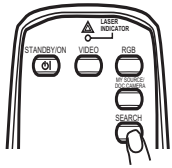
1. Press the MY SOURCE / DOC. CAMERA button on the remote control. The input signal will be changed into the signal you set as MY SOURCE(📖*49*).



● This function also can use for document camera. Select the input port that connected the document camera.

Searching an input signal

1. Press the SEARCH button on the remote control.
   The projector will start to check its input ports in order to find any input signals.
   When an input is found, the projector will stop searching and display the image. If no signal is found, the projector will return to the state selected before the operation.



RGB 1 → RGB 2 → HDMI → COMPONENT (Y, C_B/P_B, C_R/P_R) → S-VIDEO → VIDEO

Selecting an aspect ratio

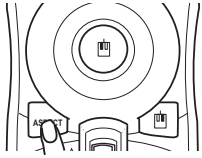
1. Press the ASPECT button on the remote control. Each time you press the button, the projector switches the mode for aspect ratio in turn.

❍ **For an RGB signal**
NORMAL → 4:3 → 16:9 → 16:10 → REAL

❍ **For an HDMI signal**
NORMAL → 4:3 → 16:9 → 16:10 → 14:9 → REAL

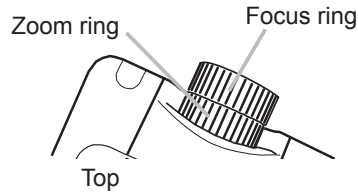
❍ **For a video signal, s-video signal or component video signal**
4:3 → 16:9 → 16:10 → 14:9 → REAL

❍ **For no signal**
16:10 (fixed)



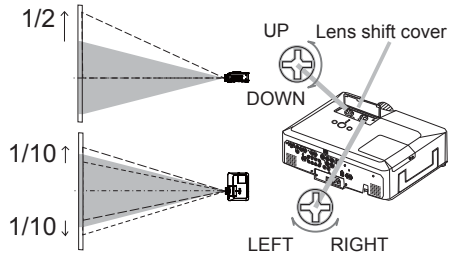
● The NORMAL mode keeps the original aspect ratio of the signal.
● Some input signals may not be displayed in the aspect ratio as selected in the menu. In this case, use the ASPECT button on the remote control to select other aspect ratio.

Adjusting the zoom and focus



1. Use the zoom ring to adjust the screen size.
2. Use the focus ring to focus the picture.

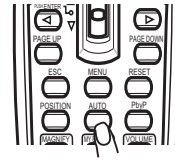
Adjusting the lens shift



1. Use the vertical lens shift dial to shift the picture upward or downward.
2. Use the horizontal lens shift dial to shift the picture left or right.

NOTE • When the vertical lens shift is adjusted, it is recommended to shift the picture upward.

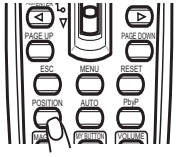
Using the automatic adjustment feature



1. Press the AUTO button on the remote control.
   Pressing this button performs the following.
   - ❍ **For an RGB signal**
     The vertical position, the horizontal position and the horizontal phase will be automatically adjusted.
     Make sure that the application window is set to its maximum size prior to attempting to use this feature.
     A dark picture may still be incorrectly adjusted. Use a bright picture when adjusting.
   - ❍ **For a video signal and s-video signal**
     The video format best suited for the respective input signal will be selected automatically. This function is available only when the AUTO is selected for the VIDEO FORMAT item in the INPUT Menu (📖35). The vertical position and horizontal position will be automatically set to the default.
   - ❍ **For a component video signal**
     The vertical position, horizontal position and horizontal phase will be automatically set to the default.

   ● The automatic adjustment operation requires approx. 10 seconds. Also please note that it may not function correctly with some input. When this function is performed for a video signal, a certain extra such as a line may appear outside a picture.
   ● The items adjusted by this function may vary when the FINE or DISABLE is selected for the AUTO ADJUST item of the SERVICE item in the OPTION Menu (📖50).

Adjusting the position



1. Press the POSITION button on the remote control when no menu is indicated.
   The “POSITION” indication will appear on the screen.
2. Use the ▲/▼/◄/► cursor buttons to adjust the picture position. When you want to reset the operation, press the RESET button on the remote control during the operation.
   To complete this operation, press the POSITION button again. Even if you do not do anything, the dialog will automatically disappear after a few seconds.

- When this function is performed on a video signal, s-video signal or component video signal, some image such as an extra-line may appear at outside of the picture.
- When this function is performing on a Video signal, S-Video signal, or component signal of 480i@60 or 576i@50 input the range of this adjustment depends on the OVER SCAN in IMAGE Menu (📖32). It is not possible to adjust when the OVER SCAN is set to 10.

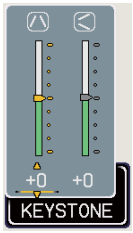
Correcting distortion

1. Press the KEYSTONE button on the remote control. A dialog will appear on the screen to aid you in correcting the distortion. Even if you do not do anything, the dialog will automatically disappear after a few seconds.

2. Use the ▲/▼ cursor buttons to select AUTO, MANUAL or PERFECT FIT operation, and press the ► button to perform the following.
   (1) AUTO executes automatic vertical keystone correction.
   - When V:INVERT or H&V:INVERT is selected to the MIRROR item in the SETUP Menu, if the projector screen is inclined or angled downward, this function may not work correctly.
   - When the zoom adjustment is set to the TELE (telephoto focus), this function may be excessive. This function should be used when the zoom adjustment is set to the full WIDE (wide-angle focus) whenever possible.
   - When the projector is placed on the level (about ±3°), this function may not work.
   - When the projector is inclined to near ±30 degree or over, this function may not work well.
   - When the vertical lens shift is not set fully upward, this function may not work well.
   - When the horizontal lens shift is not set to the center, this function may not work well.

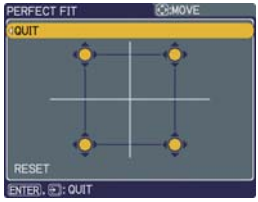
Correcting distortion (continued)

(2) MANUAL displays a dialog for keystone correction. Use the ◄/► cursor buttons to select the direction to correct (or) then use the ▲/▼ buttons for adjustment. Even if you do not do anything, the dialog will automatically disappear after a few seconds.



(3) PERFECT FIT displays a dialog for the shape adjustment of the projected image in each of the corners.

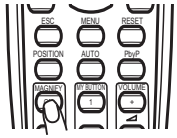
1) Choose the corner to adjust using the ▲/▼/◄/► buttons and press the ENTER or INPUT button.
2) Use the ▲/▼/◄/► buttons to adjust the position of the corner.
   Press the ENTER or INPUT button to exit the adjustment of the corner.
3) To adjust another corner, follow the same procedure from 1) above.
   To reset the adjustment of all the corners, select RESET using the ▲/▼ buttons and press the ENTER or INPUT button.



To close the dialog and complete this operation, press KEYSTONE button again. Even if you do not do anything, the dialog will automatically disappear after a few seconds.

- While the positions of the corners are adjusted with PERFECT FIT, keystone adjustment feature is unavailable. To correct the keystone distortion, reset the adjustment of all the corners.
- The adjustable range of this function will vary among inputs. For some input, this function may not work well.
- When the zoom adjustment is set to the TELE (telephoto focus), this function may be excessive. This function should be used when the zoom adjustment is set to the full WIDE (wide-angle focus) whenever possible.
- This function will be unavailable when Transition Detector is on (📖 *56*).

Using the magnify feature



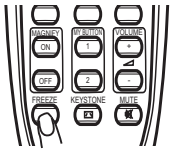
1. Press the ON button of MAGNIFY on the remote control. The “MAGNIFY” indication will appear on the screen and the projector will go into the MAGNIFY mode. When the ON button of MAGNIFY is pressed first after the projector is started, the picture will be zoomed. The indication will disappear in several seconds with no operation.

2. Use the ▲/▼ cursor buttons to adjust the zoom level.To move the zoom area, press the POSITION button in the MAGNIFY mode, then use the ▲/▼/◄/► cursor buttons to move the area. And to finalize the zoom area, press the POSITION button again.
   To exit from the MAGNIFY mode and restore the screen to normal, press the OFF button of MAGNIFY on the remote control.

- The projector automatically exits from the MAGNIFY mode when the input signal is changed or when the display condition is changed.
- In the MAGNIFY mode, the keystone distortion condition may vary, it will be restored when the projector exits from the MAGNIFY mode.

NOTE • The zoom level can be finely adjusted. Closely watch the screen to find the level you want.

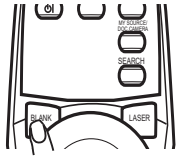
Freezing the screen



1. Press the FREEZE button on the remote control. The “FREEZE” indication will appear on the screen (however, the indication will not appear when the TURN OFF is selected for the MESSAGE item in the SCREEN Menu (🕮45)), and the projector will go into the FREEZE mode, which the picture is frozen.
   To exit the FREEZE mode and restore the screen to normal, press the FREEZE button again.

- The projector automatically exits from the FREEZE mode when some control buttons are pressed.
- If the projector continues projecting a still image for a long time, the LCD panel might possibly be burned in. Do not leave the projector in the FREEZE mode for too long.

Temporarily blanking the screen



1. Press the BLANK button on the remote control.
   The blank screen will be displayed instead of the screen of input signal. Please refer to the BLANK item in SCREEN Menu (📖42).
   To exit from the blank screen and return to the input signal screen, press the BLANK button again.

- The projector automatically exits from the BLANK mode when some control buttons are pressed.

⚠**CAUTION** ►If you wish to have a blank screen while the projector's lamp is on, use the BLANK function above. Any other method of blocking the projection light, such as attaching something to the lens or placing something in front of the lens, may cause the damage to the projector.

NOTE • The sound is not connected with the blank screen function. If necessary, set the volume or mute first.

PbyP (Picture by Picture)

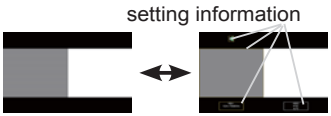
The **PbyP** is a function to display two different picture signals on a screen that is split in two areas for each signal. Some of functions can be used with the same operation as it for the normal mode (not in the **PbyP** mode). There are some operations available only in the **PbyP** mode.

Starting the PbyP

Press the PbyP button on the remote control, then the **PbyP** function will be started. To quit the **PbyP** mode, press the button again.

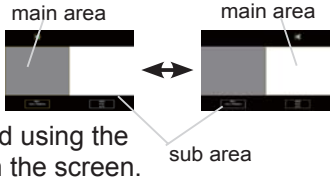
Showing the setting information

The setting information will be appeared for several seconds when the **PbyP** function is started. It shows the input signal information for each area. Also, there will be a yellow frame and speaker mark with one of the area that is the main area where most of operations are effective. The information can be appeared using the cursor buttons ▲/▼/◄/► when the setting information is not on the screen.



Changing the main area

Most of operations are effective for the main area only. Also the audio input signal paired with the picture input signal for the main area is assigned as the audio output signal. The main area can be changed using the cursor buttons ◄/► when the setting information is on the screen.



Changing the picture input signal

Press the INPUT, RGB or VIDEO button while in the **PbyP** mode, the menu to select the input signal will be appeared. Choose a signal using the cursor buttons ▲/▼. If you want to change the signal in the sub area, switch the main area using the cursor buttons ◄/► first. Displaying the same signal on the both areas is not allowed. For other combinations of the input signal, refer to the right table. Any combinations marked with X can not be selected.

<signal combination>

Sub \ Main	RGB1	RGB2	HDMI	Component	Scart RGB	S-Video	S-Video
RGB1		0	0	0	0	0	0
RGB2	0		0	0	0	0	0
HDMI	0	0		0	X	X	X
Component	0	0	0			0	0
Scart RGB	0	0	X			X	X
S-Video	0	0	X	0	X		X
Video	0	0	X	0	X	X	

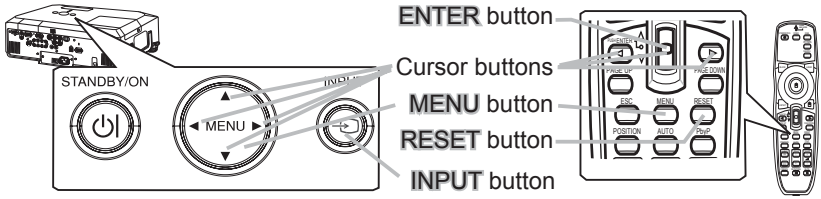
Using the PbyP SWAP function

Press the MY BUTTON1/2 assigned the **PbyP SWAP** (📖*49*). The position of the both area is exchanged without any setting change.

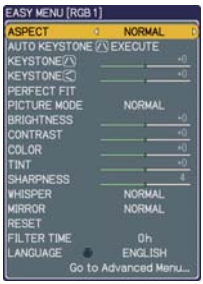
NOTE •For some signals, it may not be displayed correctly in the **PbyP** mode, even if it can be displayed properly in the normal mode.

Using the menu function

This projector has the following menus: PICTURE, IMAGE, INPUT, SETUP, AUDIO, SCREEN, OPTION, NETWORK, C.C. and EASY MENU. The EASY MENU consists of functions often used, and the other menus are classified into each purpose and brought together as the Advanced Menu. Each of these menus is operated using the same methods. The basic operations of these menus are as follows.



1. Press the MENU button on the remote control or one of the cursor buttons on the projector.
   The Advanced MENU, or EASY MENU that has priority just after powered on, will appear.
   If you want to move the menu position, use the cursor buttons after pressing the POSITION button. While the projector is displaying any menu, the MENU button on the projector works as the cursor buttons.



In the EASY MENU

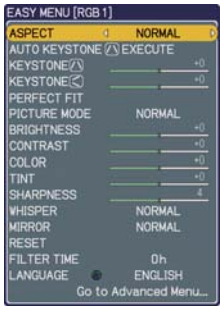
2. If you want to change it to the Advanced MENU, select the "Go to Advanced Menu..."
3. Use the ▲/▼ cursor buttons to select an item to operate.
4. Use the ◄/► cursor buttons to operate the item.

In the Advanced MENU

2. Use the ▲/▼ cursor buttons to select a menu.
   If you want to change it to the EASY MENU, select the EASY MENU.
   Then press the ► cursor button on the projector or remote control, or the ENTER button on the remote control to select an item. The display of the selected menu will be active.
3. Use the ▲/▼ cursor buttons to select an item to operate.
   Then press the ► cursor button on the projector or remote control, or the ENTER button on the remote control to progress. The operation menu of the selected item will appear.
4. Use the ▲/▼ cursor buttons to operate the item.
   - Some functions cannot be performed when a certain input port is selected, or when a certain input signal is displayed.
   - When you want to reset the operation, press the RESET button on the remote control during the operation. Note that items whose functions are performed simultaneously with operation (ex. LANGUAGE, H PHASE, VOLUME etc.) cannot be reset.
   - In the Advanced MENU, when you want to return to the previous display, press the ◄ cursor button on the projector or remote control, or the ESC button on the remote control.
5. Press the MENU button on the remote control again to close the menu and complete this operation.
   Even if you do not do anything, the dialog will automatically disappear after about 10 seconds.

EASY MENU

From the EASY MENU, items shown in the table below can be performed.
Select an item using the ▲/▼ cursor buttons on the projector or remote control. Then perform it according to the following table.



<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>ASPECT</td><td>Using the ◄/► buttons switches the mode for aspect ratio.
See the ASPECT item in IMAGE Menu (32).</td></tr>
<tr><td>AUTO KEYSTONE EXECUTE</td><td>Using the ► button executes the auto keystone function.
See the AUTO KEYSTONE EXECUTE item in SETUP Menu (38).</td></tr>
<tr><td>KEYSTONE</td><td>Using the ◄/► buttons corrects the vertical keystone distortion.
See the KEYSTONE item in SETUP Menu (38).</td></tr>
<tr><td>KEYSTONE</td><td>Using the ◄/► buttons corrects the horizontal keystone distortion.
See the KEYSTONE item in SETUP Menu (39).</td></tr>
<tr><td>PERFECT FIT</td><td>Using the ► button displays the dialog for the shape adjustment of the projected image in each of the corners.
See the PERFECT FIT item in SETUP menu (39).</td></tr>
<tr><td>PICTURE MODE</td><td>Using the ◄/► buttons switches the picture mode.
The picture modes are combinations of GAMMA and COLOR TEMP settings. Choose a suitable mode according to the projected source.
⇒ NORMAL ⇔ CINEMA ⇔ DYNAMIC ⇔ BOARD(BLACK) ⇐
⇒ DAYTIME ⇔ WHITEBOARD ⇔ BOARD(GREEN) ⇐
<table>
<tr><th></th><th>COLOR TEMP</th><th>GAMMA</th></tr>
<tr><td>NORMAL</td><td>#2 MID</td><td>#1 DEFAULT</td></tr>
<tr><td>CINEMA</td><td>#3 LOW</td><td>#2 DEFAULT</td></tr>
<tr><td>DYNAMIC</td><td>#1 HIGH</td><td>#3 DEFAULT</td></tr>
<tr><td>BOARD(BLACK)</td><td>#4 Hi-BRIGHT-1</td><td>#4 DEFAULT</td></tr>
<tr><td>BOARD(GREEN)</td><td>#5 Hi-BRIGHT-2</td><td>#4 DEFAULT</td></tr>
<tr><td>WHITEBOARD</td><td>#2 MID</td><td>#5 DEFAULT</td></tr>
<tr><td>DAYTIME</td><td>#6 Hi-BRIGHT-3</td><td>#6 DEFAULT</td></tr>
</table>
• When the combination of GAMMA and COLOR TEMP differs from pre-assigned modes above, the display on the menu for the PICTURE MODE is “CUSTOM”. Please refer to the GAMMA and COLOR TEMP (29, 30) items in PICTURE Menu.
• When this function is performed, a certain extra such as a line may appear.</td></tr>
</table>

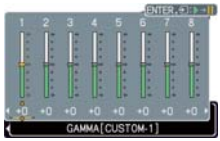
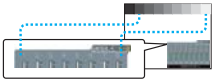
(continued on next page)

EASY MENU (continued)

Item	Description
BRIGHTNESS	Using the ◄/► buttons adjusts the brightness. See the BRIGHTNESS item in PICTURE Menu (🕮*29*).
CONTRAST	Using the ◄/► buttons adjusts the contrast. See the CONTRAST item in PICTURE Menu (🕮*29*).
COLOR	Using the ◄/► buttons adjusts the strength of whole color. See the COLOR item in PICTURE Menu (🕮*30*).
TINT	Using the ◄/► buttons adjusts the tint. See the TINT item in PICTURE Menu (🕮*30*).
SHARPNESS	Using the ◄/► buttons adjusts the sharpness. See the SHARPNESS item in PICTURE Menu (🕮*30*).
WHISPER	Using the ◄/► buttons turns off/on the whisper mode. See the WHISPER item in SETUP Menu (🕮*40*).
MIRROR	Using the ◄/► buttons switches the mode for mirror status. See the MIRROR item in SETUP Menu (🕮*40*).
RESET	Performing this item resets all of the EASY MENU items except the FILTER TIME and LANGUAGE. A dialog is displayed for confirmation. Selecting the RESET using the ▲ button performs resetting.
FILTER TIME	The usage time of the air filter is shown in the menu. Performing this item resets the filter time which counts usage time of the air filter. A dialog is displayed for confirmation. Selecting the RESET using the ▲ button performs resetting. See the FILTER TIME item in OPTION Menu (🕮*48*).
LANGUAGE	Using the ◄/► buttons changes the display language. See the LANGUAGE item in SCREEN Menu (🕮*42*).
Go to Advanced Menu...	Select “Go to Advanced Menu…” on the menu, and press the ► or ENTER button to use the menu of PICTURE, IMAGE, INPUT, SETUP, AUDIO, SCREEN, OPTION, NETWORK or C.C..

PICTURE Menu

From the PICTURE Menu, items shown in the table below can be performed.
Select an item using the ▲/▼ cursor buttons on the projector or remote control, and press the ► cursor button on the projector or remote control, or the ENTER button on the remote control to execute the item. Then perform it according to the following table.

Item	Description
BRIGHTNESS	Using the ▲/▼ buttons adjusts the brightness. Light ⇔ Dark
CONTRAST	Using the ▲/▼ buttons adjusts the contrast. Strong ⇔ Weak
GAMMA	Using the ▲/▼ buttons switches the gamma mode. #1 DEFAULT ⇔ #1 CUSTOM ⇔ #2 DEFAULT ⇔ #2 CUSTOM ⇔ #3 DEFAULT ⇕ ⇕ #6 CUSTOM #3 CUSTOM ⇕ ⇕ #6 DEFAULT ⇔ #5 CUSTOM ⇔ #5 DEFAULT ⇔ #4 CUSTOM ⇔ #4 DEFAULT **To adjust CUSTOM** Selecting a mode whose name includes CUSTOM and then pressing the ► button or the ENTER button displays a dialog to aid you in adjusting the mode. This function is useful when you want to change the brightness of particular tones. Choose an item using the ◄/► buttons, and adjust the level using the ▲/▼ buttons.  You can display a test pattern for checking the effect of your adjustment by pressing the ENTER button. Each time you press the ENTER button, the pattern changes as below. No pattern ⇨ Gray scale of 9 steps ⇨ Ramp ⇦ Gray scale of 15 steps The eight equalizing bars correspond to eight tone levels of the test pattern (Gray scale of 9 steps) except the darkest in the left end. If you want to adjust the 2nd tone from left end on the test pattern, use the equalizing adjustment bar “1”. The darkest tone at the left end of the test pattern cannot be controlled with any of equalizing adjustment bar. • When this function is performed, lines or other distortion may appear. 

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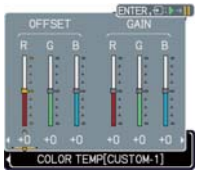
PICTURE Menu (continued)

Item	Description
COLOR TEMP	Using the ▲/▼ buttons switches the color temperature mode. #1 HIGH⇔#1 CUSTOM⇔#2 MID⇔#2 CUSTOM⇔#3 LOW ⇕ ⇕ #6 CUSTOM #3 CUSTOM ⇕ ⇕ #6 Hi-BRIGHT-3 #4 Hi-BRIGHT-1 ⇕ ⇕ #5 CUSTOM ⇔ #5 Hi-BRIGHT-2 ⇔ #4 CUSTOM **To adjust CUSTOM**  Selecting a mode whose name includes CUSTOM and then pressing the ► button or the ENTER button displays a dialog to aid you in adjusting the OFFSET and GAIN of the selected mode. OFFSET adjustments change the color intensity on the whole tones of the test pattern. GAIN adjustments mainly affect color intensity on the brighter tones of the test pattern. Choose an item using the ◄/► buttons, and adjust the level using the ▲/▼ buttons. You can display a test pattern for checking the effect of your adjustment by pressing the ENTER button. Each time you press the ENTER button, the pattern changes as below. No pattern ⇨ Gray scale of 9 steps ⇨ ⇦ Ramp ⇦ Gray scale of 15 steps • When this function is performed, lines or other distortion may appear.
COLOR	Using the ▲/▼ buttons adjusts the strength of whole color. Strong ⇔ Weak • This item can be selected only for a video signal, s-video, component video or HDMI signal.
TINT	Using the ▲/▼ buttons adjusts the tint. Greenish ⇔ Reddish • This item can be selected only for a video signal, s-video, component video or HDMI signal.
SHARPNESS	Using the ▲/▼ buttons adjusts the sharpness. Strong ⇔ Weak • There may be some noise and/or the screen may flicker for a moment when an adjustment is made. This is not a malfunction.

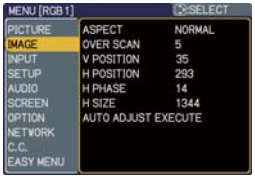
(continued on next page)

PICTURE Menu (continued)

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>ACTIVE IRIS</td><td>Using the ▲/▼ cursor buttons changes the active iris control mode.
PRESENTATION ⇔ THEATER ⇔ TURN OFF
<table>
<tr><th></th><th>Feature</th></tr>
<tr><td>PRESENTATION</td><td>The active iris displays the best presentation image for both bright and dark scenes.</td></tr>
<tr><td>THEATER</td><td>The active iris displays the best theater image for both bright and dark scenes.</td></tr>
<tr><td>TURN OFF</td><td>The active iris is always open.</td></tr>
</table>
• The screen may flicker when the PRESENTATION or THEATER modes are selected. If this occurs select TURN OFF.</td></tr>
<tr><td>MY MEMORY</td><td>This projector has 4 memories for adjustment data (for all the items of the PICTURE Menu).
Selecting a function using the ▲/▼ buttons and pressing the ► or ENTER button performs each function.
LOAD-1 ⇔ LOAD-2 ⇔ LOAD-3 ⇔ LOAD-4
SAVE-4 ⇔ SAVE-3 ⇔ SAVE-2 ⇔ SAVE-1
<u>LOAD-1, LOAD-2, LOAD-3, LOAD-4</u>
Performing a LOAD function loads the data from the memory linked in the number included in the function’s name, and adjusts the picture automatically depending on the data.
• The LOAD functions whose linked memory has no data are skipped.
• Remember that the current adjusted condition will be lost by loading data. If you want to keep the current adjustment, please save it before performing a LOAD function.
• There may be some noise and the screen may flicker for a moment when loading data. This is not malfunction.
• The LOAD functions can be also performed by the MY MEMORY button which can be set by the MY BUTTON item in OPTION Menu (📖49).
<u>SAVE-1, SAVE-2, SAVE-3, SAVE-4</u>
Performing a SAVE function saves the current adjustment data into the memory linked in the number included in the function’s name.
• Remember that the current data being stored of a memory will be lost by saving a new data into the memory.</td></tr>
</table>

IMAGE Menu

From the IMAGE Menu, items shown in the table below can be performed.
Select an item using the ▲/▼ cursor buttons on the projector or remote control, and press the ► cursor button on the projector or remote control, or ENTER button on the remote control to execute the item. Then perform it according to the following table.



Item	Description
ASPECT	Using the ▲/▼ buttons switches the mode for aspect ratio. **For an RGB signal** NORMAL ⇔ 4:3 ⇔ 16:9 ⇔ 16:10 ⇔ REAL **For an HDMI signal** NORMAL ⇔ 4:3 ⇔ 16:9 ⇔ 16:10 ⇔ 14:9 ⇔ REAL **For a Video signal, S-video signal or Component video signal** 4:3 ⇔ 16:9 ⇔ 16:10 ⇔ 14:9 ⇔ REAL **For no signal** 16:10 (fixed) • The NORMAL mode keeps the original aspect ratio of the signal. • Some input signals may not be displayed in the aspect ratio as selected in the menu. In this case, use the ASPECT button on the remote control to select other aspect ratio.
OVER SCAN	Using the ▲/▼ buttons adjusts the over-scan ratio. Large (It reduces picture) ⇔ Small (It magnifies picture) • This item can be selected only for a video, s-video, component and HDMI signal.
V POSITION	Using the ▲/▼ buttons adjusts the vertical position. Up ⇔ Down • Over-adjusting the vertical position may cause noise to appear on the screen. If this occurs, please reset the vertical position to the default setting. Pressing the RESET button when the V POSITION is selected will reset the V POSITION to the default setting. • When this function is performed on a video signal, s-video signal, or component video signal of 480i@60 or 576i@50 input the range of this adjustment depends on the OVER SCAN (📖***above***) setting. It is not possible to adjust when the OVER SCAN is set to 10. • This item cannot be selected for an HDMI signal.
H POSITION	Using the ▲/▼ buttons adjusts the horizontal position. Left ⇔ Right • Over-adjusting the horizontal position may cause noise to appear on the screen. If this occurs, please reset the horizontal position to the default setting. Pressing the RESET button when the H POSITION is selected will reset the H POSITION to the default setting. • When this function is performed on a video signal, s-video signal, or component video signal of 480i@60 or 576i@50 input the range of this adjustment depends on the OVER SCAN (📖***above***) setting. It is not possible to adjust when the OVER SCAN is set to 10. • This item cannot be selected for an HDMI signal.

(continued on next page)

IMAGE Menu (continued)

Item	Description
H PHASE	Using the ▲/▼ buttons adjusts the horizontal phase to eliminate flicker. Right ⇔ Left • This item can be selected only for an RGB signal or a component video signal. (except 480i@60, 576i@50, SCART RGB input.)
H SIZE	Using the ▲/▼ buttons adjusts the horizontal size. Large ⇔ Small • This item can be selected only for an RGB signal. • When this adjustment is excessive, the picture may not be displayed correctly. In such a case, please reset the adjustment by pressing the RESET button on the remote control during this operation.
AUTO ADJUST EXECUTE	Selecting this item performs the automatic adjustment feature. **For an RGB signal** The vertical position, the horizontal position and the horizontal phase will be automatically adjusted. Make sure that the application window is set to its maximum size prior to attempting to use this feature. A dark picture may still be incorrectly adjusted. Use a bright picture when adjusting. **For a video signal and s-video signal** The video format best suited for the respective input signal will be selected automatically. This function is available only when the AUTO is selected for the VIDEO FORMAT item in the INPUT Menu (📖35). The vertical position and horizontal position will be automatically set to the default. **For a component video signal** The vertical position, horizontal position and horizontal phase will be automatically set to the default. • The automatic adjustment operation requires approx. 10 seconds. Also please note that it may not function correctly with some input. When this function is performed for a video signal, a certain extra such as a line may appear outside a picture. • The items adjusted by this function may vary when the FINE or DISABLE is selected for the AUTO ADJUST item of the SERVICE item in the OPTION Menu (📖50).

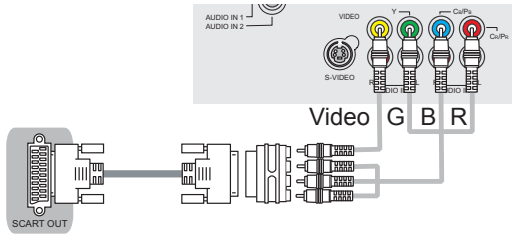
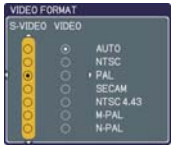
INPUT Menu

From the INPUT Menu, items shown in the table below can be performed.
Select an item using the ▲/▼ cursor buttons on the projector or remote control, and press the ► cursor button on the projector or remote control, or ENTER button on the remote control to execute the item. Then perform it according to the following table.

Item	Description
PROGRESSIVE	Using the ▲/▼ buttons switches the progress mode. TV ⇔ FILM ⇔ TURN OFF • This function is performed only for an interlaced signal at the VIDEO or S-VIDEO input, and for 480i@60, 576i@50 or 1080i@50/60 signal at the COMPONENT or HDMI input. • When TV or FILM is selected, the screen image will be sharp. FILM adapts to the 2-3 Pull-Down conversion system. But these may cause a certain defect (for example, jagged line) of the picture for a quick moving object. In such a case, please select TURN OFF, even though the screen image may lose the sharpness.
VIDEO NR	Using the ▲/▼ buttons switches the noise reduction mode. HIGH ⇔ MID ⇔ LOW • This function is performed only for the VIDEO or S-VIDEO input, and for 480i@60, 576i@50 or 1080i@50/60 signal at the COMPONENT or HDMI input.
3D-YCS	Using the ▲/▼ buttons switches the 3D-YCS mode. STILL ⇔ MOVIE ⇔ TURN OFF • This function performs only at a VIDEO input of NTSC, and PAL. • MOVIE is the mode for images with a lot of motions like movies, and STILL is the mode for images with few motions or completely still ones like slides.
COLOR SPACE	Using the ▲/▼ buttons switches the mode for color space. AUTO ⇔ RGB ⇔ SMPTE240 ⇔ REC709 ⇔ REC601 • This item can be selected only for an RGB signal or a component video signal (except 480i@60, 576i@50 and SCART RGB). • The AUTO mode automatically selects the optimum mode. • The AUTO operation may not work well at some signals. In such a case, it might be good to select a suitable mode except AUTO.

(continued on next page)

INPUT Menu (continued)

Item	Description
COMPONENT	Using the ▲/▼ buttons switches the function of the COMPONENT (Y, CB/PB, CR/PR) port. COMPONENT ⇔ SCART RGB When the SCART RGB is selected, the COMPONENT (Y, CB/PB, CR/PR) and VIDEO ports will function as a SCART RGB port. A SCART adapter or SCART cable is required for a SCART RGB input to the projector. For details, contact your dealer. 
VIDEO FORMAT	Set the video format for the S-VIDEO port and VIDEO port. (1) Use the ◄/► buttons to select the input port. (2) Using the ▲/▼ buttons switches the mode for video format. AUTO ⇔ NTSC ⇔ PAL ⇔ SECAM ⇔ N-PAL ⇔ M-PAL ⇔ NTSC4.43 ⇔  • This item is performed only for a video signal from the VIDEO port or the S-VIDEO port. • The AUTO mode automatically selects the optimum mode. • The AUTO operation may not work well for some signals. If the picture becomes unstable (e.g. an irregular picture, lack of color), please select the mode according to the input signal.
HDMI	Using the ▲/▼ cursor buttons changes the HDMI signal mode. AUTO ⇔ NORMAL ⇔ ENHANCED ⇔ • If the contrast of the screen image is too strong or too weak, try finding a more suitable mode.

	Feature
AUTO	Selecting the optimum mode automatically.
NORMAL	Suitable for DVD signals (16-235)
ENHANCED	Suitable for VGA signals (0-255)

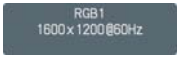
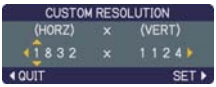
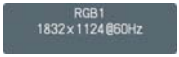
(continued on next page)

INPUT Menu (continued)

Item	Description
FRAME LOCK	Set the frame lock function on/off for each port. (1) Use the ▲/▼ buttons to select one of following ports. QUIT ⇔ RGB1 ⇔ RGB2 ⇔ HDMI (2) Use the ◄/► buttons to turns the frame lock function on/off . TURN ON ⇔ TURN OFF • This item can be performed only on a signal with a vertical frequency of 50 to 60 Hz. • When the TURN ON is selected, moving pictures are displayed more smoothly.
RGB IN	Set the RGB input signal type for the RGB port. (1) Use the ◄/► buttons to select the RGB port to be set. RGB1 ⇔ RGB2 (2) Use the ▲/▼ buttons to select the RGB input signal type. AUTO ⇔ SYNC ON G OFF • Selecting the AUTO mode allows you to input a sync on G signal or component signal from the port. • In the AUTO mode, the picture may be distorted with certain input signals. In such a case, remove the signal connector so that no signal is received and select the SYNC ON G OFF, and then reconnect the signal.

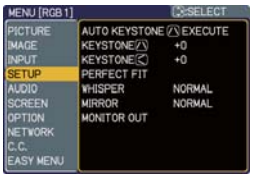
(continued on next page)

INPUT Menu (continued)

Item	Description
RESOLUTION	The resolution for the RGB1 and RGB2 input signals can be set on this projector. (1) In the INPUT Menu select the RESOLUTION using the ▲/▼ buttons and press the ► button. The RESOLUTION menu will be displayed. RESOLUTION menu (2) In the RESOLUTION menu select the resolution you wish to display using the ▲/▼ buttons. Selecting AUTO will set a resolution appropriate to the input signal. (3) Pressing the ► or ENTER button when selecting a STANDARD resolution will automatically adjust the horizontal and vertical positions, clock phase and horizontal size. The INPUT-INFORMATION- dialog (📖*51*) will be displayed.  (4) To set a custom resolution use the ▲/▼ buttons to select the CUSTOM and the CUSTOM RESOLUTION BOX will be displayed. Set the horizontal (HORZ) and vertical (VERT) resolutions using the ▲/▼/◄/► buttons. It is not guaranteed to work this function properly on any resolutions.  CUSTOM RESOLUTION BOX (5) To save the setting place the cursor on the right-most digit and press the ► button. The horizontal and vertical positions, clock phase and horizontal size will be automatically adjusted. After the INPUT-INFORMATION- (📖*51*) dialog has displayed for about 10 seconds the screen will return to the RESOLUTION menu displaying the changed resolution.  • After pressing the ► button, there may be no display or wrong images may be displayed. In this case, press the AUTO button on the remote control for about 3 seconds, or go to (6) below to restore the original resolution setting.The projector does not support the resolution that was set in the RESOLUTION_CUSTOM box. Change the resolution. (6) To revert back to the previous resolution without saving changes place the cursor on the left-most digit and press the ◄ button. The screen will then return to the RESOLUTION menu displaying the previous resolution. • For some pictures, this function may not work well.

SETUP Menu

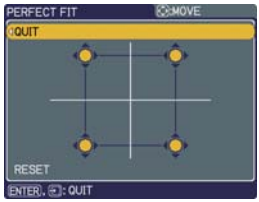
From the SETUP Menu, items shown in the table below can be performed.
Select an item using the ▲/▼ cursor buttons on the projector or remote control, and press the ► cursor button on the projector or remote control, or the ENTER button on the remote control to execute the item. Then perform it according to the following table.



Item	Description
AUTO KEYSTONE /\ EXECUTE	Selecting this item performs the Automatic keystone distortion correction. Projector automatically corrects vertical keystone distortion due to the (forward/backward) setup angle by itself. This function will be executed only once when selected in the menu. When the slant of the projector is changed, execute this function again. • The adjustable range of this function will vary among inputs. For some input, this function may not work well. • When V:INVERT or H&V:INVERT is selected to the MIRROR item in the SETUP Menu, if the projector screen is inclined or angled downward, this function may not work correctly. • When the zoom adjustment is set to the TELE (telephoto focus), this function may be excessive. This function should be used when the zoom adjustment is set to the full WIDE (wide-angle focus) whenever possible. • When the projector is placed on the level (about ±3°), this function may not work. • When the projector is inclined to near ±30 degree or over, this function may not work well. • When the vertical lens shift is not set fully upward, this function may not work well. • When the horizontal lens shift is not set to the center, this function may not work well. • This function will be unavailable when the Transition Detector is on (📖56) or the PERFECT FIT (📖39) is adjusted.
KEYSTONE /	Using the ▲/▼ buttons corrects the vertical keystone distortion. Shrink the top of the image ⇔ Shrink the bottom of the image • The adjustable range of this function will vary among inputs. For some input, this function may not work well. • When the horizontal lens shift is not set to the center, this function may not work well. • This function will be unavailable when the Transition Detector is on (📖56) or the PERFECT FIT (📖39) is adjusted.

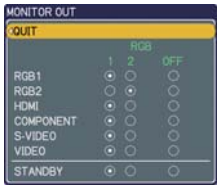
(continued on next page)

SETUP Menu (continued)

Item	Description
KEYSTONE	Using the ▲/▼ buttons corrects the horizontal keystone distortion. Shrink the right of the image ⇔ Shrink the left of the image • The adjustable range of this function will vary among inputs. For some input, this function may not work well. • When the zoom adjustment is set to the TELE (telephoto focus), this function may be excessive. This function should be used when the zoom adjustment is set to the full WIDE (wide-angle focus) whenever possible. • When the vertical lens shift is not set fully upward, this function may not work well. • This function will be unavailable when the Transition Detector is on (📖56) or the PERFECT FIT (📖39) is adjusted.
PERFECT FIT	This item allows you to adjust the shape of the projected image in each of the corners. (1) Choose the corner to adjust using the ▲/▼/◄/► buttons and press the ENTER or INPUT button. (2) Use the ▲/▼/◄/► buttons to adjust the position of the corner. Press the ENTER or INPUT button to exit the adjustment of the corner. (3) To adjust another corner, follow the same procedure from (1) above. To reset the adjustment of all the corners, select RESET using the ▲/▼ buttons and press the ENTER or INPUT button.  • While this item is adjusted, keystone adjustment feature (📖38) is unavailable. To correct the keystone distortion, reset the adjustment of all the corners. • The adjustable range of this correction will vary among inputs. For some input, this function may not work well. • This function will be unavailable when the Transition Detector is on (📖56).

(continued on next page)

SETUP Menu (continued)

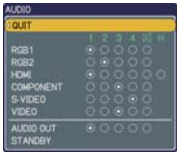
Item	Description
WHISPER	Using the ▲/▼ buttons turns off/on the whisper mode. NORMAL ⇔ WHISPER • When the WHISPER is selected, acoustic noise and screen brightness are reduced.
MIRROR	Using the ▲/▼ buttons switches the mode for mirror status. NORMAL ⇔ H:INVERT ⇔ V:INVERT ⇔ H&V:INVERT If the Transition Detector is TURN ON and MIRROR status is changed, Transition Detector Alarm (56) will be displayed when projector is restarted after the power switch is turned off.
MONITOR OUT	The combination of a picture shown on screen and output from the RGB OUT port can be arranged in the menu. The picture coming into the port selected in the (2) is output to the RGB OUT port while an image from the port chosen in the (1) is on screen. (1) Choose a picture input port using ▲/▼ buttons. QUIT ⇔ RGB1 ⇔ RGB2 ⇔ HDMI STANDBY ⇔ VIDEO ⇔ S-VIDEO ⇔ COMPONENT(Y, C_B/P_B, C_R/P_R) • Choose STANDBY, to select the output signal from the RGB OUT port in the standby mode. • While QUIT is selected, pressing the ◄ button returns to the previous menu. (2) Select one of the RGB ports using ◄/► buttons. RGB1 ⇔ RGB2 ⇔ OFF • OFF disables the RGB OUT port. 

AUDIO Menu

From the AUDIO Menu, items shown in the table below can be performed.
Select an item using the ▲/▼ cursor buttons on the projector or remote control, and press the ► cursor button on the projector or remote control, or ENTER button on the remote control to execute the item. Then perform it according to the following table.

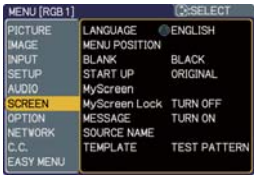
NOTE • The speaker sound may distorted or the case may be trembling when the volume is too high or treble/bass is emphasized or WOW is activated. In that case, make the volume reduced, bass/treble low or WOW effect to be weakend.

Item	Description
VOLUME	Using the ▲/▼ buttons adjusts the volume. High ⇔ Low
TREBLE	Using the ▲/▼ buttons adjusts the treble level. High ⇔ Low
BASS	Using the ▲/▼ buttons adjusts the bass level. High ⇔ Low
SPEAKER	Using the ▲/▼ buttons turns the speaker function on/off. TURN ON ⇔ TURN OFF • When the TURN ON is selected the built-in speaker works.
AUDIO	Allocates the audio ports. (1) Choose a picture input port using the ▲/▼ buttons. ⇔ QUIT ⇔ RGB1 ⇔ RGB2 ⇔ HDMI ⇔ COMPONENT AUDIO OUT STANDBY ⇔ VIDEO ⇔ S-VIDEO ⇔ (2) Select the audio port to be interlocked with the input port using the ◄/► buttons. 1 ⇔ 2 ⇔ 3 ⇔ 4 ⇔ 🔇 ⇔ H • H is abbreviation of HDMI. • H can be selected for HDMI port only. When H is selected, the audio signal to HDMI port will be output if HDMI is chosen as a display source. • 🔇 disables the audio output. • When 🔇 is selected to VIDEO, S-VIDEO or COMPONENT port, the C.C. (Closed Caption) is automatically activated, if the C.C. is set to AUTO in the DISPLAY Menu of the C.C. Menu and the signal from the input port supports the C.C. feature (🕮65).
HDMI AUDIO	The HDMI AUDIO is set to 1 as default. In case the HDMI audio does not work well, try 2. 1 ⇔ 2



SCREEN Menu

From the SCREEN Menu, items shown in the table below can be performed.
Select an item using the ▲/▼ cursor buttons on the projector or remote control, and press the ► cursor button on the projector or remote control, or ENTER button on the remote control to execute the item. Then perform it according to the following table.



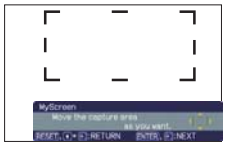
Item	Description
LANGUAGE	Using the ▲/▼ buttons switches the OSD (On Screen Display) language. ENGLISH ⇔ FRANÇAIS ⇔ DEUTSCH ⇔ ESPAÑOL ⇔ ITALIANO ⇕ ⇕ TÜRKÇE NORSK ⇕ ⇕ POLSKI NEDERLANDS ⇕ ⇕ SUOMI PORTUGUÊS ⇕ ⇕ РУССКИЙ ⇔ SVENSKA ⇔ 한글 ⇔ 繁體中文 ⇔ 简体中文 ⇔ 日本語
MENU POSITION	Using the ▲/▼/◄/► buttons adjusts the menu position. To quit the operation, press the MENU button on the remote control or keep no operation for about 10 seconds.
BLANK	Using the ▲/▼ buttons switches the mode for the blank screen. The blank screen is a screen for the temporarily blanking feature (📖*24*). It is displayed by pressing the BLANK button on the remote control. MyScreen ⇔ ORIGINAL ⇔ BLUE ⇔ WHITE ⇔ BLACK ⇧⇦⇦⇦

SCREEN Menu (continued)

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>START UP</td><td>Using the ▲/▼ buttons switches the mode for the start-up screen. The start-up screen is a screen displayed when no signal or an unsuitable signal is detected.
MyScreen ⇔ ORIGINAL ⇔ TURN OFF
<table>
<tr><th></th><th>Feature</th></tr>
<tr><td>MyScreen</td><td>Screen can be registered by the MyScreen item (📖44).</td></tr>
<tr><td>ORIGINAL</td><td>Screen preset as the standard screen.</td></tr>
<tr><td>TURN OFF</td><td>Plain black screen.</td></tr>
</table>
• To avoid remaining as an afterimage, the MyScreen or ORIGINAL screen will change to the BLANK screen (📖42) after several minutes. If also the BLANK screen is the MyScreen or ORIGINAL, the plain black screen is instead used.
• When the TURN ON is selected to the MyScreen PASSWORD of SECURITY item in OPTION Menu (📖53), the START UP is fixed to MyScreen.</td></tr>
</table>

(continued on next page)

SCREEN Menu (continued)

Item	Description
MyScreen	This item allows you to capture an image for use as a MyScreen image which can be used as the BLANK screen and START UP screen. Display the image you want to capture before executing the following procedure. 1. Selecting this item displays a dialog titled “MyScreen”. It will ask you if you start capturing an image from the current screen. Please wait for the target image to be displayed, and press the ENTER button on the remote control when the image is displayed. The image will freeze and the frame for capturing will appear. To stop performing, press the RESET or ESC button on the remote control. 2. Using the ▲/▼/◄/► buttons adjusts the frame position. Please move the frame to the position of the image which you want to use. The frame may not be able to be moved for some input signals.  To start registration, press the ENTER button on the remote control. To restore the screen and return to the previous dialog, press the RESET or ESC button on the remote control. Registration takes several minutes. When the registration is completed, the registered screen and the following message is displayed for several seconds: **“MyScreen registration is finished.”** If the registration failed, the following message is displayed: **“A capturing error has occurred. Please try again.”** • This item cannot be selected for an HDMI signal. • This function cannot be selected when the TURN ON is selected to the MyScreen Lock item (📖***below***). • This function cannot be selected when the TURN ON is selected to the MyScreen PASSWORD of SECURITY item in OPTION Menu (📖***53***).
MyScreen Lock	Using the ▲/▼ buttons turns on/off the MyScreen lock function. TURN ON ⇔ TURN OFF When the TURN ON is selected, the item MyScreen is locked. Use this function for protecting the current MyScreen. • This function cannot be selected when the TURN ON is selected to the MyScreen PASSWORD of SECURITY item in OPTION Menu (📖***53***).

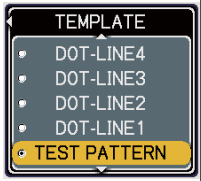
(continued on next page)

SCREEN Menu (continued)

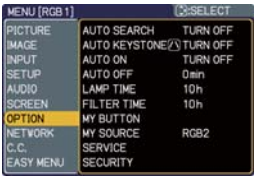
Item	Description
MESSAGE	Using the ▲/▼ buttons turns on/off the message function. TURN ON ⇔ TURN OFF When the TURN ON is selected, the following message function works. "AUTO IN PROGRESS" while automatically adjusting "NO INPUT IS DETECTED" "SYNC IS OUT OF RANGE" "INVALID SCAN FREQ" "Searching…." while searching for the input "Detecting…." while an input signal is detected The indication of the input signal displayed by changing The indication of the aspect ratio displayed by changing The indication of the PICTURE MODE displayed by changing The indication of the ACTIVE IRIS displayed by changing The indication of the MY MEMORY displayed by changing The indication of "FREEZE" and "II" while freezing the screen by pressing the FREEZE button. • When the TURN OFF is selected, please remember if the picture is freezing. Do not mistake freezing for a malfunction (📖*23*).
SOURCE NAME	Each input port for this projector can have a name applied to it. (1) Use the ▲/▼ buttons on the SCREEN Menu to select SOURCE NAME and press the ► button. The SOURCE NAME menu will be displayed. (2) Use the ▲/▼ buttons on the SOURCE NAME menu to select the port to be named and press the ► button. Right side of the menu is blank until a name is specified. The SOURCE NAME dialog will be displayed. (3) The current name will be displayed on the first line. Use the ▲/▼/◄/► buttons and the ENTER or INPUT button to select and enter characters. The RESET button can be used to erase 1 character at a time. Also if you move the cursor to DELETE or ALL CLEAR on screen and push the ENTER or INPUT button, 1 character or all characters will be erased. The name can be a maximum of 16 characters. (4) To change an already inserted character, press the ▲ button to move the cursor to the first line, and use the ◄/► buttons to move the cursor on the character to be changed. After pressing the ENTER or INPUT button, the character is selected. Then, follow the same procedure as described at the item (3) above. (5) To finish entering text, move the cursor to the SAVE on screen and press the ENTER or INPUT button. To revert to the previous name without saving changes, move the cursor to the CANCEL on screen and press the ENTER or INPUT button.

(continued on next page)

SCREEN Menu (continued)

Item	Description
TEMPLATE	Using ▲/▼ buttons switches the mode for the template screen. The selected template pattern can be displayed when the MY BUTTON allocated to the TEMPLATE function is pressed (📖*49*). ⇄ DOT-LINE4 ⇔ DOT-LINE3 ⇔ DOT-LINE2 TEST PATTERN ⇔ DOT-LINE1⇄ 

OPTION Menu



From the OPTION Menu, items shown in the table below can be performed.
Select an item using the ▲/▼ cursor buttons on the projector or remote control, and press the ► cursor button on the projector or remote control, or ENTER button on the remote control to execute the item, except for the items LAMP TIME and FILTER TIME. Then perform it according to the following table.

Item	Description
AUTO SEARCH	Using the ▲/▼ buttons turns on/off the automatic signal search function. TURN ON ⇔ TURN OFF When the TURN ON is selected, detecting no signal automatically cycles through input ports in the following order. The search is started from the current port. Then when an input is found, the projector will stop searching and display the image. RGB 1 ⇨ RGB 2 ⇨ HDMI ⇨ COMPONENT ⇨ S-VIDEO ⇨ VIDEO
AUTO KEYSTONE	Using the ▲/▼ buttons turns on/off the automatic keystone function. TURN ON ⇔ TURN OFF TURN ON : Automatic keystone distortion correction will be executed whenever changing the slant of the projector. TURN OFF : This function is disabled. Please execute the AUTO KEYSTONE EXECUTE in the SETUP Menu for automatic keystone distortion correction. • When the projector is suspended from the ceiling this feature will not function properly so select the TURN OFF. • This function will be unavailable when the Transition Detector is on (56).
AUTO ON	Using the ▲/▼ buttons turns on/off the AUTO ON function. TURN ON ⇔ TURN OFF When set to the TURN ON, the lamp in projector will be automatically turned on without the usual procedure (17), only when the projector is supplied with the power after the power was cut while the lamp was on. • This function does not work as long as the power has been supplied to the projector while the lamp is off. • After turning the lamp on by the AUTO ON function, if neither input nor operation is detected for about 30 minutes, the projector is turned off, even though the AUTO OFF function (48) is disabled.

(continued on next page)

OPTION Menu (continued)

Item	Description
AUTO OFF	Using the ▲/▼ buttons adjusts the time to count down to automatically turn the projector off. Long (max. 99 minutes) ⇔ Short (min. 0 minute = DISABLE) When the time is set to 0, the projector is not turned off automatically. When the time is set to 1 to 99, and when the passed time with no-signal or an unsuitable signal reaches at the set time, the projector lamp will be turned off. If one of the projector's buttons or the remote control buttons is pressed or one of the commands (except get commands) is transmitted to the CONTROL port during the corresponding time, projector will not be turned off. Please refer to the section “Turning off the power” (📖***17***).
LAMP TIME	The lamp time is the usage time of the lamp, counted after the last resetting. It is shown in the OPTION Menu. Pressing the RESET button on the remote control or the ► button of the projector displays a dialog. To reset the lamp time, select the RESET using the ▲ button. RESET ⇦ CANCEL • Please reset the lamp time only when you have replaced the lamp, for a suitable indication about the lamp. • For the lamp replacement, see the section “Lamp” (📖***66, 67***).
FILTER TIME	The filter time is the usage time of the air filter, counted after the last resetting. It is shown in the OPTION Menu. Pressing the RESET button on the remote control or the ► button of the projector displays a dialog. To reset the filter time, select the RESET using the ▲ button. RESET ⇦ CANCEL • Please reset the filter time only when you have cleaned or replaced the air filter, for a suitable indication about the air filter. • For the air filter cleaning, see the section “Air filter” (📖***68***).

(continued on next page)

OPTION Menu (continued)

Item	Description
MY BUTTON	This item is to assign one of the following function to MY BUTTON 1 and 2 on the remote control (📖*6*). Choose 1 or 2 on the MY BUTTON menu using the ◄/► button first. Then using the ▲/▼ buttons sets one of the following functions to the chosen button. • RGB1: Sets port to RGB1. • RGB2: Sets port to RGB2. • HDMI: Sets port to HDMI. • COMPONENT: Sets port to COMPONENT (Y, CB/PB, CR/PR). • S-VIDEO: Sets port to S-VIDEO. • VIDEO: Sets port to VIDEO. • INFORMATION: Displays the INPUT -INFORMATION- (📖*51*) or NETWORK -INFORMATION- (📖*64*) or nothing. • AUTO KEYSTONE ⏢ : Performs automatic keystone distortion correction (📖*38*). • MY MEMORY: Loads one of adjustment data stored (📖*31*). When more than one data are saved, the adjustment changes every time the MY BUTTON is pushed. When no data is saved in memory, the dialog "No saved data" appears. When the current adjustment is not saved to memory, the dialog as shown in the right appears. If you want to keep the current adjustment, please press the ◄ button to quit. Otherwise loading a data will overwrite the current adjusted condition. • ACTIVE IRIS: Changes the active iris mode. • PICTURE MODE: Changes the PICTURE MODE (📖*27*). • FILTER RESET: Displays the filter time reset confirmation dialogue (📖*48*). • AV MUTE : Turns the picture and audio on/off. • TEMPLATE: Makes the template pattern selected to the TEMPLATE item (📖*46*) appear or disappear. • PbyP SWAP: Swaps the picture of right side with left side in the PbyP mode (📖*25*). • MY IMAGE: Displays the MY IMAGE menu (📖*63*).
MY SOURCE	This item is to assign an input signals to MY SOURCE / DOC. CAMERA button on the remote control (📖*6, 19*). Using the ▲/▼ buttons sets one of the following input signal. ⮐ RGB1 ⇔ RGB2 ⇔ HDMI ⮑ VIDEO ⇔ S-VIDEO ⇔ COMPONENT
SERVICE	Selecting this item displays the SERVICE menu. Select an item using the ▲/▼ buttons, and press the ► button or the ENTER button on the remote control to execute the item. ⮐ FAN SPEED ⇔ AUTO ADJUST ⇔ FILTER MESSAGE ⮑ FACTORY RESET ⇔ INFORMATION ⇔ REMOTE FREQ. ⇔ REMOTE RECEIV. ⇔ KEY LOCK **FAN SPEED** Using the ▲/▼ buttons switches the rotation speed of the cooling fans. The HIGH is the mode for use at highlands etc. Note that the projector is noisier when the HIGH is selected. HIGH ⇔ NORMAL

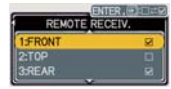
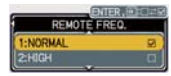
(continued on next page)

OPTION Menu (continued)

Item	Description
SERVICE (continued)	**AUTO ADJUST** Using the ▲/▼ buttons to select one of the mode. When the DISABLE is selected, the automatic adjustment feature is disabled. FINE ⇔ FAST ⇔ DISABLE FINE: Finer tuning including H.SIZE adjustment. FAST: Faster tuning, setting H.SIZE to prearranged data for the input signal. • Depending on conditions, such as input image, signal cable to the projector, environment around the projector, etc., the automatic adjustment may not work correctly. In such a case, please choose DISABLE to disable the automatic adjustment, and make adjustment manually. **FILTER MESSAGE** Use the ▲/▼ button to set the timer for the interval to show the message for cleaning up the air filter. 500h ⇔ 1000h ⇔ 1500h ⇔ 2000h ⇔ TURN OFF After choosing an item except TURN OFF, the message "REMINDER *** HRS PASSED AFTER THE LAST FILTER CHECK" will appear after the timer reaches the interval time set by this feature (📖*71*). When the TURN OFF is chosen, the message will not appear. Utilize this feature to keep the air filter clean, setting the suitable time according to your environment of this projector. • Please check and clean the air filter periodically, even if there is no message. If the air filter becomes to be blocked by dust or others, the internal temperature will rise, which could cause malfunction, or reduce the lifetime of the projector. • Please be careful with the operating environment of the projector and the condition of the air filter.

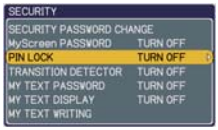
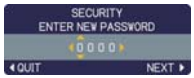
(continued on next page)

OPTION Menu (continued)

Item	Description
SERVICE (continued)	**KEY LOCK** Using the ▲/▼ buttons turns on/off the key lock feature. When TURN ON is selected, the buttons on the projector except the STANDBY/ON button are locked. TURN ON ⇔ TURN OFF • Please use to avoid a mischief and touching accidentally. This function does not have any effect on the remote control. **REMOTE RECEIV.** (1) Select a remote sensor using the ▲/▼ button. 1:FRONT ⇔ 2:TOP ⇔ 3:REAR  (2) Switch it using the ENTER or INPUT button. ☐ (off) ⇔ ☑ (on) • A sensor cannot be turned off when the other two are off. Always at least one sensor is on. **REMOTE FREQ.** Use the ▲/▼ button to change the Projector's remote sensor setting (🕮*14*). 1:NORMAL ⇔ 2:HIGH  Items with a checkmark are on. The factory default setting is for both 1:NORMAL and 2:HIGH to be on. If the remote control does not function correctly, set the this to either only 1 or only 2 as described in Remote Control Settings (🕮*14*). Neither can be turned off at the same time. **INFORMATION** Selecting this item displays a dialog titled “INPUT-INFORMATION-”. It shows the information about the current input. • The “FRAME LOCK” message on the dialog means the frame lock function is working. • The “SCART RGB” message means the COMPONENT port is working as a SCART RGB input port. Please refer to the COMPONENT item in INPUT Menu (🕮*35*). • This item can't be selected for no signal and sync out. • When the MY TEXT DISPLAY is set to TURN ON, the MY TEXT is displayed together with the input information in the INPUT-INFORMATION- box. (🕮*58*) **FACTORY RESET** Selecting RESET using the button ▲ performs this function. By this function, all the items in all of menus will collectively return to the initial setting. Note that the items LAMP TIME, FILTER TIME, LANGUAGE, SECURITY and NETWORK settings are not reset. RESET ⇦ CANCEL

(continued on next page)

OPTION Menu (continued)

Item	Description
SECURITY	This projector is equipped with security functions. User registration is required before using the security functions. Please contact your local dealer. **1. Using Security Features** **1.1 Inputting the PASSWORD** 1.1-1 Use the ▲/▼ buttons on the OPTION Menu to select SECURITY and press the ► button. The ENTER PASSWORD box will be displayed. The factory default PASSWORD is **2700**. This PASSWORD can be changed (1.2 Changing the PASSWORD). • It is strongly recommended the factory default PASSWORD to be changed as soon as possible. ENTER PASSWORD BOX 1.1-2 Use the ▲/▼/◄/► buttons to enter the registered PASSWORD. Move the cursor to the right side of the ENTER PASSWORD BOX and press the ► button to display the SECURITY menu. If an incorrect PASSWORD is input, the ENTER PASSWORD BOX will be displayed again. If incorrect PASSWORD is input 3 times, the projector will turn off. Afterwards the projector will turn off every time an incorrect PASSWORD is input.  SECURITY menu **1.2 Changing the PASSWORD** 1.2-1 Use the ▲/▼ buttons on the SECURITY menu to select SECURITY PASSWORD CHANGE and press the ► button to display the ENTER NEW PASSWORD BOX.  ENTER NEW PASSWORD BOX 1.2-2 Use the ▲/▼/◄/► buttons to enter the new PASSWORD. 1.2-3 Move the cursor to the right side of the ENTER NEW PASSWORD BOX and press the ► button to display the NEW PASSWORD AGAIN BOX, enter the same PASSWORD again. NEW PASSWORD AGAIN BOX 1.2-4 Move the cursor to the right side of the NEW PASSWORD AGAIN BOX and press the ► button and the NOTE NEW PASSWORD BOX will be displayed for about 20 seconds, please make note of the PASSWORD during this time. Pressing the ENTER button on the remote control or INPUT button on the projector will close the NOTE NEW PASSWORD BOX. • Please do not forget your PASSWORD. NOTE NEW PASSWORD BOX

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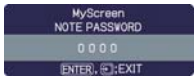
OPTION Menu (continued)

Item	Description
SECURITY (continued)	**1.3 If you have forgotten your PASSWORD** 1.3-1 Follow the procedure in 1.1-1 to display the ENTER PASSWORD BOX. 1.3-2 While the ENTER PASSWORD BOX is displayed, press and hold the RESET button on the remote control for about 3 seconds or press and hold the INPUT button for 3 seconds while pressing the ► button on the projector. The 10 digit Inquiring Code will be displayed. • If there is no key input for about 55 seconds while the Inquiring Code is displayed, the menu will close. If necessary, repeat the process from 1.3-1. Inquiring Code (PASSWORD) 1.3-3 Contact your dealer with the 10 digit Inquiring Code. Your PASSWORD will be sent after your user registration information is confirmed. **2. Using the MyScreen PASSWORD Function** The MyScreen PASSWORD function can be used to prohibit access to the MyScreen function and prevent the currently registered MyScreen image from being overwritten. **2.1 Turning on the MyScreen PASSWORD Function** 2.1-1 Use the ▲/▼ buttons on the SECURITY menu to select MyScreen PASSWORD and press the ► button to display the MyScreen PASSWORD on/off menu. MyScreen PASSWORD on/off menu **2.2 Setting the PASSWORD** 2.2-1 Display the MyScreen on/off menu using the procedure in 2.1-1. 2.2-2 Use the ▲/▼ buttons on the MyScreen PASSWORD on/off menu to select TURN ON. The ENTER PASSWORD BOX (small) will be displayed. ENTER PASSWORD BOX (small) 2.2-3 Use the ▲/▼/◄/► buttons to enter the PASSWORD. Move the cursor to the right side of the ENTER PASSWORD BOX (small) and press the ► button to display the PASSWORD AGAIN BOX, enter the same PASSWORD again. PASSWORD AGAIN BOX

(continued on next page)

OPTION Menu (continued)

Item	Description
SECURITY (continued)	2.2-4 Move the cursor to the right side of the PASSWORD AGAIN BOX and press the ► button to display the PASSWORD for about 20 seconds, please make note of the PASSWORD during this time.  NOTE PASSWORD BOX Pressing the ENTER button on the remote control or INPUT button on the projector will return to MyScreen PASS WORD on/off menu. When a PASSWORD is set for MyScreen: • The MyScreen registration function (and menu) will be unavailable. • The MyScreen Lock menu will be unavailable. • The START UP setting will be locked on MyScreen (and the menu will be unavailable). Turning the MyScreen PASSWORD off will allow normal operation of these functions. • Please do not forget your MyScreen PASSWORD. **2.3 Turning the PASSWORD off** 2.3-1 Follow the procedure in 2.1-1 to display the MyScreen PASSWORD on/off menu. 2.3-2 Select TURN OFF to display the ENTER PASSWORD BOX (large). Enter the registered PASSWORD and the screen will return to the MyScreen on/off menu. If an incorrect PASSWORD is input, the menu will close. If necessary, repeat the process from 2.3-1. **2.4 If you have forgotten your PASSWORD** 2.4-1 Follow the procedure in 2.1-1 to display the MyScreen PASSWORD on/off menu. 2.4-2 Select TURN OFF to display the ENTER PASSWORD BOX (large). The 10 digit Inquiring Code will be displayed inside the BOX. ENTER PASSWORD BOX (large) 2.4-3 Contact your dealer with the 10 digit Inquiring Code. Your PASSWORD will be sent after your user registration information is confirmed. **3. Using the PIN LOCK Function** PIN LOCK is a function which prevents the projector from being used unless a registered Code is input. **3.1 Registering the PIN Code** 3.1-1 Use the ▲/▼ buttons on the SECURITY menu to select PIN LOCK and press the ► button or the ENTER button to display the PIN LOCK on/off menu. PIN LOCK on/off menu 3.1-2 Use the ▲/▼ buttons on the PIN LOCK on/off menu to select TURN ON and the PIN BOX will be displayed.

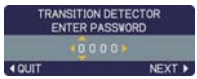
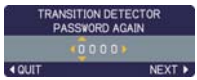
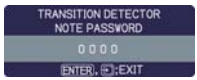
(continued on next page)

OPTION Menu (continued)

Item	Description
SECURITY (continued)	3.1-3 Input a 4 part PIN Code using the ▲/▼/◄/►/ RGB and INPUT buttons. The PIN CODE AGAIN BOX will appear. Reenter the same PIN Code. This will complete the PIN Code registration. PIN BOX • If there is no key input for about 55 seconds while the PIN BOX or the PIN CODE AGAIN BOX is displayed, the menu will close. If necessary, repeat the process from 3.1-1. Afterwards, anytime the projector is restarted after the power switch is turned off the PIN BOX will be displayed. Enter the registered PIN Code. The projector can be used after entering the registered PIN Code. If an incorrect PIN Code is input, the PIN BOX will be displayed again. PIN CODE AGAIN BOX If an incorrect PIN Code is input 3 times, the projector will turn off. Afterwards the projector will turn off every time an incorrect PIN Code is input. The projector will also turn off if there is no key input for about 5 minutes while the PIN BOX is displayed. This function will activate only when the projector is started after the power switch was turned off. • Please do not forget your PIN Code. **3.2 Turning Off the PIN LOCK Function** 3.2-1 Follow the procedure in 3.1-1 to display the PIN LOCK on/off menu. Use the ▲/▼ buttons to select TURN OFF and the PIN BOX will be displayed. Enter the registered PIN Code to turn the PIN LOCK function off. If an incorrect PASSWORD is input 3 times, the menu will close. **3.3 If you have forgotten your PIN Code** 3.3-1 While the PIN BOX is displayed, press and hold the RESET button for three seconds or press and hold the INPUT button for 3 seconds while pressing the ► button on the projector. Inquiring Code (PIN Code) • If there is no key input for about 5 minutes while the Inquiring Code is displayed, the projector will turn off. 3.3-2 Contact your dealer with the 10 digit Inquiring Code. Your PASSWORD will be sent after your user registration information is confirmed.

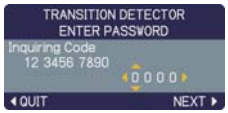
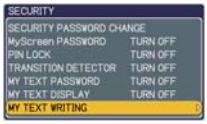
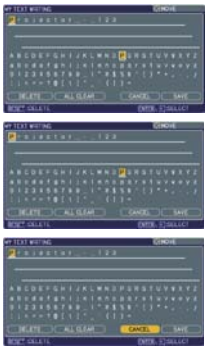
(continued on next page)

OPTION Menu (continued)

Item	Description
SECURITY (continued)	**4. Using the Transition Detector Function** While the Transition Detector function is ON, when power switch is started to supply to the projector, it might react as below. • Transition Detector alarm shown below might appear on screen, if the projector has been moved or re-installed. • Transition Detector alarm might appear on screen, if the MIRROR setting has been changed. • Keystone adjustment feature and the adjustment of the PERFECT FIT have been prohibited as long as the Transition Detector function is on. **4.1 Turning On the Transition Detector Function** 4.1-1 Use the ▲/▼ buttons on the SECURITY menu to select Transition Detector and press the ► or the ENTER button to display the Transition Detector on/off menu. Select TURN ON and the current angle and mirror setting will be recorded. Transition Detector on/off menu • This feature may not function properly if the projector is not in a stable position when TURN ON is selected. 4.1-2 If this function is set to TURN ON when the vertical angle of the projector or mirror setting at which the projector is turned on is different than the previously recorded, the Transition Detector Alarm will be displayed and the projector will not display the input signal. Transition Detector Alarm Set the Transition Detector off in the SECURITY menu to display the input signal. If the Transition Detector ALARM is displayed for about 5 minutes, the lamp will turn off. This function will activate only when the projector is started after the power switch was turned off. **4.2 Setting the Transition Detector PASSWORD** 4.2-1 Use the ▲/▼ buttons on the SECURITY menu to select Transition Detector and press the ► or the ENTER button to display the Transition Detector on/off menu. 4.2-2 Use the ▲/▼ buttons on the Transition Detector on/off menu to select TURN ON. The ENTER PASSWORD BOX (small) will be displayed.  ENTER PASSWORD BOX (small) 4.2-3 Use the ▲/▼/◄/► buttons to enter a PASSWORD. Move the cursor to the right side of the ENTER PASSWORD BOX (small) and press the ► button to display the PASSWORD AGAIN BOX, enter the same PASSWORD again.  PASSWORD AGAIN BOX 4.2-4 Move the cursor to the right side of the PASSWORD AGAIN BOX and press the ► button to display the PASSWORD for about 20 seconds, please make note of the PASSWORD during this time.  NOTE PASSWORD BOX Pressing the ENTER button on the remote control or the INPUT button on the projector will return to the Transition Detector on/off menu. • Please do not forget your Transition Detector PASSWORD.

(continued on next page)

OPTION Menu (continued)

Item	Description
SECURITY (continued)	**4.3 Setting the Transition Detector off** 4.3-1 Follow the procedure in 4.1-1 to display the Transition Detector on/off menu. 4.3-2 Select TURN OFF to display the ENTER PASSWORD BOX (large). Enter the registered PASSWORD and the screen will return to the Transition Detector on/off menu. If an incorrect PASSWORD is input, the menu will close. If necessary, repeat the process from 4.3-1. **4.4 If you have forgotten your PASSWORD** 4.4-1 Follow the procedure in 4.1-1 to display the Transition Detector on/off menu. 4.4-2 Select TURN OFF to display the ENTER PASSWORD BOX (large). The 10 digit Inquiring Code will be displayed inside the BOX. 4.4-3 Contact your dealer with the 10 digit Inquiring Code. Your PASSWORD will be sent after your user registration information is confirmed.  ENTER PASSWORD BOX (large) **5. Using the MY TEXT PASSWORD function** This item allows you to display your own message (MY TEXT) on the START UP screen and INPUT-INFORMATION. It can be protected by a password to prevent it from being overwritten. **5.1 Writing the MY TEXT** (1) Use the ▲/▼ buttons on the SECURITY menu to select the MY TEXT WRITING menu and press the ► button. The MY TEXT WRITING dialog will be displayed.  (2) The current MY TEXT will be displayed on the first 3 lines. If not yet written, the lines will be blank. Use the ▲/▼/◄/► buttons and the ENTER or INPUT button to select and enter characters. The RESET button can be used to erase 1 character at a time. Also if you move the cursor to DELETE or ALL CLEAR on screen and push the ENTER or INPUT button, 1 character or all characters will be erased. The MY TEXT can be input up to 24 characters on each line.  (3) To change an already inserted character, press the ▲/▼ button to move the cursor to one of the first 3 lines, and use the ◄/► buttons to move the cursor on the character to be changed. After pressing the ENTER or INPUT button, the character is selected. Then, follow the same procedure as described at the item (2) above. (4) To finish entering text, move the cursor to the SAVE on screen and press the ENTER or INPUT button. To revert to the previous MY TEXT without saving changes, move the cursor to the CANCEL on screen and press the ENTER or INPUT button. • The MY TEXT WRITING function is available only when the MY TEXT PASSWORD function is set to TURN OFF.

(continued on next page)

OPTION Menu (continued)

Item	Description
SECURITY (continued)	**5.2 Displaying the MY TEXT** (1) Use the ▲/▼ buttons on the SECURITY menu to select the MY TEXT DISPLAY menu and press the ► button to display the MY TEXT DISPLAY on/off menu. MY TEXT DISPLAY on/ off menu (2) Use the ▲/▼ buttons on the MY TEXT DISPLAY on/off menu to select on or off. TURN ON ⇔ TURN OFF When it is set TURN ON, the MY TEXT will be displayed on the START UP screen and the INPUT-INFORMATION- when the INFORMATION on the SERVICE menu is chosen. • This function is available only when the MY TEXT PASSWORD function is set to the TURN OFF. **5.3 Turning on the MY TEXT PASSWORD** The MY TEXT PASSWORD function can prevent the MY TEXT from being overwritten. 5.3-1 Turning on the MY TEXT PASSWORD function (1) Use the ▲/▼ buttons on the SECURITY menu to select the MY TEXT PASSWORD menu and press the ► button to display the MY TEXT PASSWORD on/off menu. MY TEXT PASSWORD on/off menu 5.3-2 Setting the MY TEXT PASSWORD (1) Display the MY TEXT PASSWORD on/off menu using the procedure in 5.3-1 (2) Use the ▲/▼ buttons on the MY TEXT PASSWORD menu to select TURN ON. The ENTER PASSWORD BOX (small) will be displayed. ENTER PASSWORD BOX (small) (3) Use the ▲/▼/◄/► buttons to enter the PASSWORD. Move the cursor to the right side of the ENTER PASSWORD BOX (small) and press the ► button to display the PASSWORD AGAIN BOX, and then enter the same PASSWORD again. PASSWORD AGAIN BOX (4) Move the cursor to the right side of the PASSWORD AGAIN BOX and press ► button to display the PASSWORD for about 20 seconds, then please make note of the PASSWORD during this time. NOTE PASSWORD BOX Pressing the ENTER button on the remote control or INPUT button on the projector will return to the MY TEXT PASSWORD on/off menu. When the PASSWORD is set for the MY TEXT; • The MY TEXT DISPLAY menu will be unavailable, which can prohibit changing the DISPLAY setting. • The MY TEXT WRITING menu will be unavailable, which can prevent the MY TEXT from being overwritten.

(continued on next page)

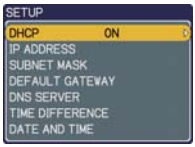
OPTION Menu (continued)

Item	Description
SECURITY (continued)	5.3-3 Turning the MY TEXT PASSWORD off (1) Follow the procedure in 5.3-1 to display the MY TEXT PASSWORD on/off menu. (2) Select TURN OFF to display the ENTER PASSWORD BOX (large). Enter the registered PASSWORD and the screen will return to the MY TEXT PASSWORD on/off menu. ENTER PASSWORD BOX (large) If an incorrect PASSWORD is input, the menu will close. If necessary, repeat the process from 5.3-3(1) 5.3.4 If you have forgotten your PASSWORD. (1) Follow the procedure in 5.3-1 to display the MY TEXT PASSWORD on/off menu. (2) Select TURN OFF to display the ENTER PASSWORD BOX (large). The 10 digit inquiring code will be displayed inside the box. (3) Contact your dealer with the 10 digit inquiring code. Your PASSWORD will be sent after your user registration information is confirmed.

NETWORK Menu

Remember that incorrect network settings on this projector may cause trouble on the network. Be sure to consult with your network administrator before connecting to an existing access point on your network.
Select “NETWORK” from the main menu to access the following functions.
Select an item using the ▲/▼ cursor buttons on the projector or remote control, and press the ► cursor button on the projector or remote control, or ENTER button on the remote control to execute the item. Then perform it according to the following table.
See the User’s Manual - Network Guide for details of NETWORK operation.

NOTE • If you are not utilizing SNTP (**Date/Time Settings of the User’s Manual (detailed) - Network Guide**), then you must set the DATE AND TIME during the initial installation.

Item	Description	
SETUP	Selecting this item displays the SETUP Menu for the network. Use the ▲/▼ buttons to select an item, and the ► or ENTER button on the remote control to perform the item. 	
	DHCP (Dynamic Host Configuration Protocol)	Use the ▲/▼ buttons to turn DHCP on/off. ON ⇔ OFF Select OFF when the network does not have DHCP enabled. • When the “DHCP” setting changes to “ON”, it takes a little time to obtain IP address from DHCP server. • Auto IP function will be assigned an IP address if the projector could not obtain an IP address from server even if DHCP is “ON”.

(continued on next page)

NETWORK Menu (continued)

<table>
<tr><th>Item</th><th colspan="2">Description</th></tr>
<tr><td rowspan="6">SETUP
(continued)</td><td>IP ADDRESS</td><td>Use the ▲/▼/◄/► buttons to enter the IP ADDRESS. This function can only be used when DHCP is set to OFF.

• The IP ADDRESS is the number that identifies this projector on the network. You cannot have two devices with the same IP ADDRESS on the same network.
• The IP ADDRESS “0.0.0.0” is prohibited.</td></tr>
<tr><td>SUBNET MASK</td><td>Use the ▲/▼/◄/► buttons to enter the same SUBNET MASK used by your PC. This function can only be used when DHCP is set to OFF.

• The SUBNET MASK ”0.0.0.0” is prohibited.</td></tr>
<tr><td>DEFAULT GATEWAY</td><td>Use the ▲/▼/◄/► buttons to enter the DEFAULT GATEWAY (a node on a computer network that serves as an access point to another network) address.

This function can only be used when DHCP is set to OFF.</td></tr>
<tr><td>DNS SERVER</td><td>Use the ▲/▼/◄/► buttons to input the DNS server address. The DNS server is a system to control domain names and IP addresses on the Network.
 </td></tr>
<tr><td>TIME DIFFERENCE</td><td>Use the ▲/▼ buttons to enter the TIME DIFFERENCE.
Set the same TIME DIFFERENCE as the one set on your PC. If unsure, consult your IT manager.
Use the ◄ button to return to the menu after setting the TIME DIFFERENCE.
 </td></tr>
<tr><td>DATE AND TIME</td><td>Use the ▲/▼/◄/► buttons to enter the Year (last two digits), Month, Date, Hour and Minute.

• The projector will override this setting and retrieve DATE AND TIME information from the Time server when SNTP is enabled. (Date/Time Settings of the User’s Manual (detailed) - Network Guide)</td></tr>
</table>

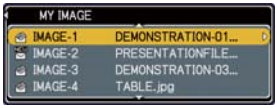
(continued on next page)

NETWORK Menu (continued)

Item	Description
PROJECTOR NAME	(1) Use the ▲/▼ buttons on the NETWORK Menu to select the PROJECTOR NAME menu and press the ► button. The PROJECTOR NAME dialog will be displayed. (2) The current PROJECTOR NAME will be displayed on the first 3 lines. If not yet written, the lines will be blank. Use the ▲/▼/◄/► buttons and the ENTER or INPUT button to select and enter characters. The RESET button can be used to erase 1 character at a time. Also if you move the cursor to DELETE or ALL CLEAR on screen and push the ENTER or INPUT button, 1 character or all characters will be erased. The PROJECTOR NAME can be input up to 64 characters. (3) To change an already inserted character, press the ▲/▼ button to move the cursor to one of the first 3 lines, and use the ◄/► buttons to move the cursor on the character to be changed. After pressing the ENTER or INPUT button, the character is selected. Then, follow the same procedure as described at the item (2) above. (4) To finish entering text, move the cursor to the SAVE on screen and press the ENTER or INPUT button. To revert to the previous PROJECTOR NAME without saving changes, move the cursor to the CANCEL on screen and press the ENTER or INPUT button.

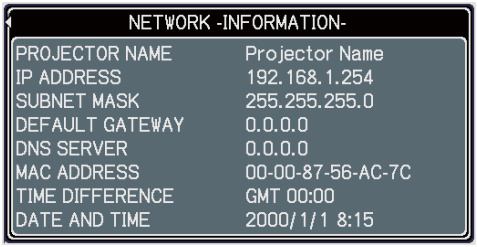
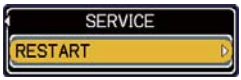
(continued on next page)

NETWORK Menu (continued)

Item	Description
MY IMAGE	Selecting this item displays the MY IMAGE menu. The application software “PJImage” is required to store image(s) into the projector.  Use the ▲/▼ buttons to select an item which is a still image by the MY IMAGE (🕮 **MY IMAGE (Still Image Transfer) Display of the User’s Manual (detailed) - Network Guide)** and the ► or ENTER button to display the image. • The item without image stored cannot be selected. • The image names are each displayed in 16 characters or less. **To switch the image displayed** Use the ▲/▼ buttons. **To return to the menu** Press the ◄ or ESC button on the remote control. **To erase the image displayed and its source file in the projector.** (1) Press the RESET button on the remote control while displaying an image to display the MY IMAGE RESET menu. (2) Press the ENTER button on the remote control or the INPUT button on the projector to perform to erase. To stop erasing, press the ESC button on the remote control or the ◄ button on the projector.

(continued on next page)

NETWORK Menu (continued)

Item	Description
INFORMATION	Selecting this item displays the NETWORK -INFORMATION- dialog for confirming the network settings.  • The PROJECTOR NAME is displayed. • Nothing (blank) is shown in the “PROJECTOR NAME” field until you setup the item (62). • When the voltage level of the battery for the built in clock decreases, the set time may become incorrect even though accurate date and time are input. Replace the battery suitably (69). • IP ADDRESS, SUBNET MASK and DEFAULT GATEWAY indicate “0.0.0.0” when DHCP is ON and the projector has not gotten address from DHCP server.
SERVICE	Executing this item restarts and initializes the network functions. Choose the RESTART using the button ►.  Then use the button ▲ to execute. Network will be once cut off when choose restart. If DHCP is selected on, IP address may be changed. After selecting RESTART, NETWORK Menu may not be controlled approx. 30 seconds.

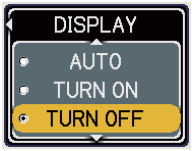
C.C. (Closed Caption) Menu

The closed caption setting can be changed through C.C. Menu in the advance menu. Please select the item that you will change using ▲/▼ cursor buttons.

• The C.C. (Closed Caption) is the function that displays a transcript or dialog of the audio portion of a video, files or other presentation or other relevant sounds. It is required to have NTSC format video or 480i@60 format component video source supporting C.C. feature to utilize this function.

It may not work properly, depending on equipment or signal source. In this case, please turn off the Closed Caption.

Item	Description
DISPLAY	Select Closed Caption DISPLAY setting from following options using ▲/▼buttons. TURN OFF ⇔ TURN ON ⇔ AUTO TURN OFF:Closed Caption is OFF TURN ON: Closed Caption is ON AUTO: Closed Caption automatically displays when the volume is muted. • The caption is not displayed when the OSD menu is active. • The Closed Caption is the function to display the dialogue, narration, and / or sound effects of a television program or other video sources. The Closed Caption availability is depending upon broadcaster and/or content.
MODE	Select Closed Caption MODE setting from following options using ▲/▼buttons. CAPTIONS ⇔ TEXT CAPTIONS: Display Closed Caption TEXT: Display Text data, which is for additional information such as news reports or a TV program guide. The information covers the entire screen. Not all of the C.C. program has Text information.
CHANNEL	Select Closed Caption CHANNEL from following options using ▲/▼buttons. 4 ⇔ 3 ⇔ 2 ⇔ 1 1: Channel 1, primary channel / language 2: Channel 2 3: Channel 3 4: Channel 4 The channel data may vary, depending on the content. Some channel might be used for secondary language or empty.



Maintenance

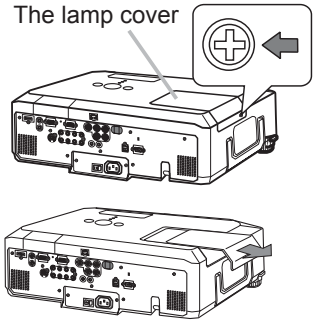
Lamp

A lamp has finite product life. Using the lamp for long periods of time could cause the pictures darker or the color tone poor. Note that each lamp has a different lifetime, and some may burst or burn out soon after you start using them. Preparation of a new lamp and early replacement are recommended. To prepare a new lamp, contact your dealer and tell the lamp type number.

Type number = DT00873

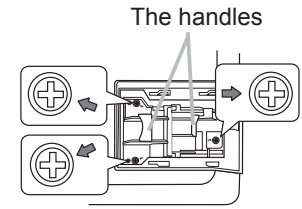
Replacing the lamp

1. Turn the projector off, and unplug the power cord. Allow the projector to cool for at least 45 minutes.
2. Prepare a new lamp. If the projector is mounted on a ceiling, or if the lamp has broken, also ask the dealer to replace the lamp.



In case of replacement by yourself,

3. Loosen the screw (marked by arrow) of the lamp cover and then slide the lamp cover to the side to remove it.
4. Loosen the 3 screws (marked by arrow) of the lamp, and slowly pick up the lamp by the handles.
5. Insert the new lamp, and retighten firmly the 3 screws of the lamp that are loosened in the previous process to lock it in place.
6. Slide the lamp cover back in place and firmly fasten the screw of the lamp cover.



7. Turn the projector on and reset the lamp time using the LAMP TIME item in the OPTION Menu (*48*).
   (1) Press the MENU button to display a menu.
   (2) Point at the “Go to Advanced Menu …” in the menu using the ▼/▲ button, then press the ► button.
   (3) Point at the “OPTION” in the left column of the menu using the ▼/▲button, then press the ► button.
   (4) Point at the “LAMP TIME” using the ▼/▲ button, then press the ► button. A dialog will appear.
   (5) Press the ▲ button to select “RESET” on the dialog. It performs resetting the lamp time.

NOTE • Please reset the lamp time only when you have replaced the lamp, for a suitable indication about the lamp.

Lamp (continued)

Lamp warning

⚠ HIGH VOLTAGE ⚠ HIGH TEMPERATURE ⚠ HIGH PRESSURE

⚠WARNING ►The projector uses a high-pressure mercury glass lamp. The lamp can break with a loud bang, or burn out, if jolted or scratched, handled while hot, or worn over time. Note that each lamp has a different lifetime, and some may burst or burn out soon after you start using them. In addition, if the bulb bursts, it is possible for shards of glass to fly into the lamp housing, and for gas containing mercury and dust containing fine particles of glass to escape from the projector's vent holes.
►**About disposal of a lamp:** This product contains a mercury lamp; do not put it in a trash. Dispose of it in accordance with environmental laws.
• For lamp recycling, go to www.lamprecycle.org (in the US).
• For product disposal, contact your local government agency or www.eiae.org (in the US) or www.epsc.ca (in Canada).
For more information, call your dealer.

Disconnect the plug from the power outlet	• If the lamp should break (it will make a loud bang when it does), unplug the power cord from the outlet, and make sure to request a replacement lamp from your local dealer. Note that shards of glass could damage the projector's internals, or cause injury during handling, so please do not try to clean the projector or replace the lamp yourself. • If the lamp should break (it will make a loud bang when it does), ventilate the room well, and make sure not to inhale the gas or fine particles that come out from the projector's vent holes, and not to get them into your eyes or mouth. • Before replacing the lamp, turn the projector off and unplug the power cord, then wait at least 45 minutes for the lamp to cool sufficiently. Handling the lamp while hot can cause burns, as well as damaging the lamp.
	• Never unscrew except the appointed (marked by an arrow) screws. • Do not open the lamp cover while the projector is suspended from a ceiling. This is dangerous, since if the lamp's bulb has broken, the shards will fall out when the cover is opened. In addition, working in high places is dangerous, so ask your local dealer to have the lamp replaced even if the bulb is not broken. • Do not use the projector with the lamp cover removed. At the lamp replacing, make sure that the screws are screwed in firmly. Loose screws could result in damage or injury.
	• Use only the lamp of the specified type. Use of a lamp that does not meet the lamp specifications for this model could cause a fire, damage or shorten the life of this product. • If the lamp breaks soon after the first time it is used, it is possible that there are electrical problems elsewhere besides the lamp. If this happens, contact your local dealer or a service representative. • Handle with care: jolting or scratching could cause the lamp bulb to burst during use. • Using the lamp for long periods of time, could cause it dark, not to light up or to burst. When the pictures appear dark, or when the color tone is poor, please replace the lamp as soon as possible. Do not use old (used) lamps; this is a cause of breakage.

Air filter

Please check and clean the air filter periodically. When the indicators or a message prompts you to clean the air filter, comply with it as soon as possible. The air filter has two kinds of filters inside. Replace the filters when they are damaged or too soiled. To prepare the new filters, make contact with your dealer and tell the following type number.

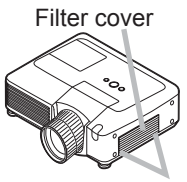
Type number = MU05661

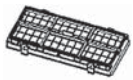
When you replace the lamp, please replace the air filter. An air filter of specified type will come together with a replacement lamp for this projector.

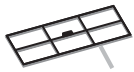
1. Turn the projector off, and unplug the power cord. Allow the projector to sufficiently cool down.
2. Use a vacuum cleaner on and around the filter cover.
3. Pull the filter cover knobs while lifting it, to take the filter unit off.
4. Use a vacuum cleaner for the filter vent of the projector and both sides of the filter unit.

If the filters are damaged or too soiled, replace them according to the following procedure number 5 to 7. Otherwise, please jump to the procedure number 8.

5. Pull the filter frame's knob up while holding the filter cover to remove the filter frame, then take the filters out.
6. Set new filters where former filters were. Put the larger meshed filter into a filter cover first. Then put the finer meshed filter on the larger meshed one.
7. Put the filter frame back where it was.
8. Put the filter unit back into the projector.
9. Turn the projector on and reset the filter time using the FILTER TIME item in the EASY MENU
   (1) Press the MENU button to display a menu.
   (2) Point at the "FILTER TIME" using the ▼/▲ button, then press the ► button. A dialog will appear.
   (3) Press the ▲ button to select RESET on the dialog. It performs resetting the filter time.

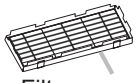



Filter unit


Filter frame

Filter (finer meshed)

Filter (larger meshed)


Filter cover

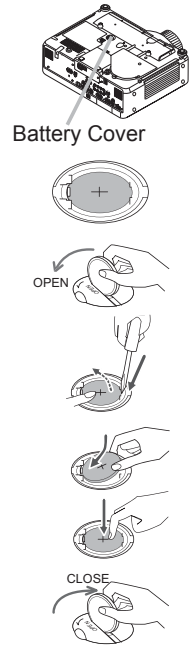
⚠**WARNING** ►Before taking care of the air filter, make sure the power cable is not plugged in, then allow the projector to cool sufficiently.
►Use only the air filter of the specified type. Do not use the projector without the air filter or the filter cover. It could result in a fire or malfunction to the projector.
►Clean the air filter periodically. If the air filter becomes clogged by dust or the like, internal temperatures rise and could cause a fire, a burn or malfunction to the projector.

NOTE • Please reset the filter time only when you have cleaned or replaced the air filter, for a suitable indication about the air filter.
• The projector may display the message such as "CHECK THE AIR FLOW" or turn off the projector, to prevent the internal heat level rising.

Internal clock battery

Consumption of the battery makes the clock not to work correctly. When the clock is wrong or it has stopped, please replace the battery according to the following procedures.

1. Turn the projector off, and unplug the power cord. Allow the projector to cool sufficiently.
2. After making sure that the projector has cooled adequately, slowly turn over the projector, so that the bottom is facing.
3. Turn the battery cover fully in the direction indicated "**OPEN**" using a coin or the like, and pick the cover up to remove it.
4. Pry up the battery using a flathead screwdriver or the like to take it out. While prying it up, put a finger lightly on the battery since it may pop out of the holder.
5. Replace battery with new **HITACHI MAXELL**, Part No.**CR2032** or **CR2032H**. Slide the battery in under the plastic claw, and push it into the holder until it clicks.
6. Replace the battery cover in place, then turn it in the direction indicated "**CLOSE**" using such as coins, to fix.



⚠**WARNING** ►Always handle the batteries with care and use them only as directed. Battery may explode if mistreated. Do not recharge, disassemble or dispose of in fire. And also improper use may result in cracking or leakage, which could result in fire, injury and/or pollution of the surrounding environment.
• Be sure to use only the batteries specified.
• Make sure the plus and minus terminals are correctly aligned when loading a battery. If the battery is placed in the battery holder upside-down, it may be hard to remove.
• Keep a battery away from children and pets. If swallowed consult a physician immediately for emergency treatment.
• Do not short circuit or solder a battery.
• Do not allow a battery in a fire or water. Keep batteries in a dark, cool and dry place.
• If you observe battery leakage, wipe out the leakage and then replace a battery. If the leakage adheres to your body or clothes, rinse well with water immediately.
• Obey the local laws on disposing the battery.

NOTE • The internal clock's time will be reset when the battery is removed. Please reconfigure the time via the menu or a web browser after replacing the battery. (🕮 **Date/Time Settings in the User's Manual (detailed) - Network Guide)**

Other care

Inside of the projector

In order to ensure the safe use of your projector, please have it cleaned and inspected by your dealer about once every year.

Caring for the lens

If the lens is flawed, soiled or fogged, it could cause deterioration of display quality. Please take care of the lens, being cautious of handling.

1. Turn the projector off, and unplug the power cord. Allow the projector to cool sufficiently.
2. After making sure that the projector is cool adequately, lightly wipe the lens with a commercially available lens-cleaning wipe. Do not touch the lens directly with your hand.

Caring for the cabinet and remote control

Incorrect care could have adverse influence such as discoloration, peeling paint, etc.

1. Turn the projector off, and unplug the power cord. Allow the projector to cool sufficiently.
2. After making sure that the projector is cool adequately, lightly wipe with gauze or a soft cloth.
   If the projector is extremely dirty, dip soft cloth in water or a neutral cleaner diluted in water, and wipe lightly after wringing well. Then, wipe lightly with a soft, dry cloth.

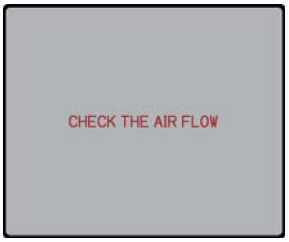
⚠**WARNING** ►Before caring, make sure the power switch is off and the power cable is not plugged in, and then allow the projector to cool sufficiently. The care in a high temperature state of the projector could cause a burn and/or malfunction to the projector.
►Never try to care for the inside of the projector personally. Doing is so dangerous.
►Avoid wetting the projector or inserting liquids in the projector. It could result in a fire, an electric shock, and/or malfunction to the projector.
• Do not put anything containing water, cleaners or chemicals near the projector.
• Do not use aerosols or sprays.

⚠**CAUTION** ►Please take right care of the projector according to the following. Incorrect care could cause not only an injury but adverse influence such as discoloration, peeling paint, etc.
►Do not use cleaners or chemicals other than those specified in this manual.
►Do not polish or wipe with hard objects.

Troubleshooting

Related messages

When the unit's power is on, messages such as those shown below may be displayed. When any such message is displayed on the screen, please follow the instructions described below. If the same message is displayed after the remedy, or if a message other than the following appears, please contact your dealer or service company.
Although these messages will be automatically disappeared around several minutes, it will be reappeared every time the power is turned on.

Message	Description
	There is no input signal. Please confirm the signal input connection, and the status of the signal source.
	The horizontal or vertical frequency of the input signal is not within the specified range. Please confirm the specs for your projector or the signal source specs.
	An improper signal is input. Please confirm the specs for your projector or the signal source specs.
	**The internal temperature is rising.** Please turn the power off, and allow the projector to cool down at least 20 minutes. After having confirmed the following items, please turn the power ON again. • Is there blockage of the air passage aperture? • Is the air filter dirty? • Does the peripheral temperature exceed 35°C? If the same indication is displayed after the remedy, please set FAN SPEED of the SERVICE item in the OPTION Menu to HIGH.
	A note of precaution when cleaning the air filter. Please immediately turn the power off, and clean or change the air filter referring to the “Air filter” section of this manual (📖*68*). After you have cleaned or changed the air filter, please be sure to reset the filter timer (📖*28, 48*).

Regarding the indicator lamps

Lighting and flashing of the POWER indicator, the LAMP indicator, and the TEMP indicator have the meanings as described in the table below. Please follow the instructions within the table. If the same indication is displayed after the remedy, or if an indication other than the following is displayed, please contact your dealer or service company.

POWER indicator	LAMP indicator	TEMP indicator	Description
Lighting In Orange	Turned **off**	Turned **off**	**The projector is in a standby state.** Please refer to the section “Power On/Off”.
Blinking In Green	Turned **off**	Turned **off**	**The projector is warming up.** Please wait.
Lighting In Green	Turned **off**	Turned **off**	**The projector is in an on state.** Ordinary operations may be performed.
Blinking In Orange	Turned **off**	Turned **off**	**The projector is cooling down.** Please wait.
Blinking In Red	(discre-tionary)	(discre-tionary)	**The projector is cooling down. A certain error has been detected.** Please wait until the POWER indicator finishes blinking, and then perform the proper measure using the item descriptions below.
Blinking In Red or Lighting In Red	Lighting In Red	Turned **off**	**The lamp does not light, and there is a possibility that interior portion has become heated.** Please turn the power off, and allow the projector to cool down at least 20 minutes. After the projector has sufficiently cooled down, please make confirmation of the following items, and then turn the power on again. • Is there blockage of the air passage aperture? • Is the air filter dirty? • Does the peripheral temperature exceed 35°C? If the same indication is displayed after the remedy, please change the lamp referring to the section “Lamp”.
Blinking In Red or Lighting In Red	*Blinking In Red*	Turned **off**	**The lamp cover has not been properly fixed.** Please turn the power off, and allow the projector to cool down at least 45 minutes. After the projector has sufficiently cooled down, please make confirmation of the attachment state of the lamp cover. After performing any needed maintenance, turn the power on again. If the same indication is displayed after the remedy, please contact your dealer or service company.

(Continued on next page)

Regarding the indicator lamps (continued)

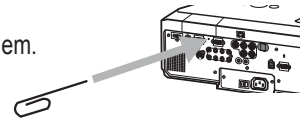
POWER indicator	LAMP indicator	TEMP indicator	Description
Blinking In ***Red*** *or* Lighting In **Red**	Turned **off**	*Blinking In* ***Red***	**The cooling fan is not operating.** Please turn the power off, and allow the projector to cool down at least 20 minutes. After the projector has sufficiently cooled down, please make confirmation that no foreign matter has become caught in the fan, etc., and then turn the power on again. If the same indication is displayed after the remedy, please contact your dealer or service company.
Blinking In ***Red*** *or* Lighting In **Red**	Turned **off**	Lighting In **Red**	**There is a possibility that the interior portion has become heated.** Please turn the power off, and allow the projector to cool down at least 20 minutes. After the projector has sufficiently cooled down, please make confirmation of the following items, and then turn the power on again. • Is there blockage of the air passage aperture? • Is the air filter dirty? • Does the peripheral temperature exceed 35°C? If the same indication is displayed after the remedy, please set FAN SPEED of the SERVICE item in the OPTION Menu to HIGH.
Lighting In **Green**	Simultaneous *blinking in* ***Red***		**It is time to clean the air filter.** Please immediately turn the power off, and clean or change the air filter referring to the section “Air Filter”. After cleaning or changing the air filter, please be sure to reset the filter timer. After the remedy, reset the power to ON.
Lighting In **Green**	Alternative *blinking in* ***Red***		**There is a possibility that the interior portion has become overcooled.** Please use the unit within the usage temperature parameters (5°C to 35°C). After the treatment, reset the power to ON.
Blinking in ***Green*** *for approx. 3 seconds*	Turned **off**	Turned **off**	**At least 1 “Power ON” schedule is saved to the projector.** (Please refer to the User’s Manual (detailed) - Network Guide: Schedule Settings for more information.)

NOTE • When the interior portion has become overheated, for safety purposes, the power source is automatically turned off, and the indicator lamps may also be turned off. In such a case, press the “O” (OFF) side of the power switch, and wait at least 45 minutes. After the projector has sufficiently cooled down, please make confirmation of the attachment state of the lamp and lamp cover, and then turn the power on again.

Phenomena that may be easy to be mistaken for machine defects

⚠**WARNING** ►Never use the projector if abnormal operations such as smoke, strange odor, excessive sound, damaged casing or elements or cables, penetration of liquids or foreign matter, etc. should occur. In such cases, immediately turn off the power switch and then disconnect the power plug from the power outlet. After making sure that the smoke or odor has stopped, contact your dealer or service company.

1. Before requesting repair, please check in accordance with the following chart. This operation sometimes resolves your problem. If the situation cannot be corrected,



2. The projector's microprocessor may need to be reset. Please push the Shutdown switch by using a pin or similar and the projector will be turned off immediately. Before turning it again, wait at least 10 minutes to make the projector cool down enough.

3. Some setting may be wrong. Please use the FACTORY RESET function of the SERVICE item in the OPTION Menu (📖51) to reset all settings to factory default. Then, if the problem is not removed after the remedy, please contact your dealer or service company.

Phenomenon	Cases not involving a machine defect	Reference page
Power does not come on.	**The electrical power cord is not plugged in.** Correctly connect the power cord.	12
	The power switch is not set to the on position. Set the power switch to [|] (On).	17
	The main power source has been interrupted during operation such as by a power outage (blackout), etc. Please turn the power off, and allow the projector to cool down at least 2 minutes, then turn the power on again.	17
	Either there is no lamp and/or lamp cover, or either of these has not been properly fixed. Please turn the power off, and allow the projector to cool down at least 45 minutes. After the projector has sufficiently cooled down, please make confirmation of the attachment state of the lamp and lamp cover, and then turn the power on again.	66
Neither sounds nor pictures are outputted.	**The signal cables are not correctly connected.** Correctly connect the connection cables.	10
	Signal source does not correctly work. Correctly set up the signal source device by referring to the manual of the source device.	–
	The input changeover settings are mismatched. Select the input signal, and correct the settings.	18, 19
	The BLANK function for pictures and the MUTE function for sounds are working. AV mute may be active. Refer to the item "Sound does not come out" and "No pictures are displayed" on the next page to turn off the MUTE and BLANK functions.	18, 24

(Continued on next page)

Phenomena that may be easily mistaken for machine defects (continued)

Phenomenon	Cases not involving a machine defect	Reference page
Sound does not come out.	**The signal cables are not correctly connected.** Correctly connect the audio cables.	10
	The MUTE function is working. Restore the sound pressing the MUTE or VOLUME button on the remote control.	18
	The volume is adjusted to an extremely low level. Adjust the volume to a higher level using the menu function or the remote control.	18
	The AUDIO setting is not correct. Correctly set the items in the AUDIO Menu.	41
	The audio on your HDMI equipment is not set to Linear PCM. The HDMI input on this projector supports Linear PCM audio only. Check the audio setting on your HDMI equipment.	11
	The audio on the HDMI input is muted. Change the HDMI AUDIO setting in the AUDIO Menu.	41
	The digital audio in HDMI signal does not work well. Use the analogue audio, connecting either an RCA audio cable or stereo mini cable.	10
No pictures are displayed.	**The lens cover is attached.** Remove the lens cover.	3, 17
	The signal cables are not correctly connected. Correctly connect the connection cables.	10
	The brightness is adjusted to an extremely low level. Adjust BRIGHTNESS to a higher level using the menu function or the remote control.	28
	The computer cannot detect the projector as a plug and play monitor. Make sure that the computer can detect a plug and play monitor using another plug and play monitor.	11
	The BLANK screen is displayed. Press the BLANK button on the remote control.	24
No pictures or disturbed pictures are displayed on HDMI input.	**The HDMI cable is not correctly connected.** Correctly connect the HDMI cable.	10
	Your HDMI equipment is not compatible with the projector. This projector can be connected with another equipment that has HDMI or DVI connector, but with some equipment the projector may not work properly.	11
	Your HDMI equipment and the projector are not harmonized. Turn off the both equipment, and turn on them again	–
	The signal format on the HDMI is not supported. Check the video setting on your HDMI equipment.	11

(Continued on next page)

Phenomena that may be easily mistaken for machine defects (continued)

Phenomenon	Cases not involving a machine defect	Reference page
Video screen display freezes.	**The FREEZE function is working.** Press the FREEZE button to restore the screen to normal.	23
Colors have a faded- out appearance, or Color tone is poor.	**Color settings are not correctly adjusted.** Perform picture adjustments by changing the COLOR TEMP, COLOR, TINT and/or COLOR SPACE settings, using the menu functions.	28, 30, 34
	COLOR SPACE setting is not suitable. Change the COLOR SPACE setting to AUTO, RGB, SMPTE240, REC709 or REC601.	34
Pictures appear dark.	**The brightness and/or contrast are adjusted to an extremely low level.** Adjust BRIGHTNESS and/or CONTRAST settings to a higher level using the menu function.	28
	The WHISPER function is working. Select NORMAL for the WHISPER item in the SETUP Menu.	28, 40
	The lamp is approaching the end of its product lifetime. Replace the lamp.	66, 67
Pictures appear blurry.	**Either the focus and/or horizontal phase settings are not properly adjusted.** Adjust the focus using the focus ring, and/or H PHASE using the menu function.	20, 33
	The lens is dirty or misty. Clean the lens referring to the section “Caring for the lens”.	70
Some kind of image degradation such as flickering or stripes appear on the screen.	**The OVER SCAN ratio is too big.** Adjust OVER SCAN in the IMAGE menu smaller.	32
	Excessive VIDEO NR. Change the setting of VIDEO NR in the INPUT menu.	34
	The FRAME LOCK function cannot work on the current input signal. Set FRAME LOCK in the INPUT menu to OFF.	36
Pictures are trembling.	**The exhaust ventilation holes at front is blocked by some objects.** Remove any objects from front side of the projector.	4
The picture is distorted or shifted.	**The shape of picture is not corrected appropriately.** Use the keystone correction or PERFECT FIT function.	21, 22

NOTE • Although bright spots or dark spots may appear on the screen, this is a unique characteristic of liquid crystal displays, and it does not constitute or imply a machine defect.

Warranty and after-service

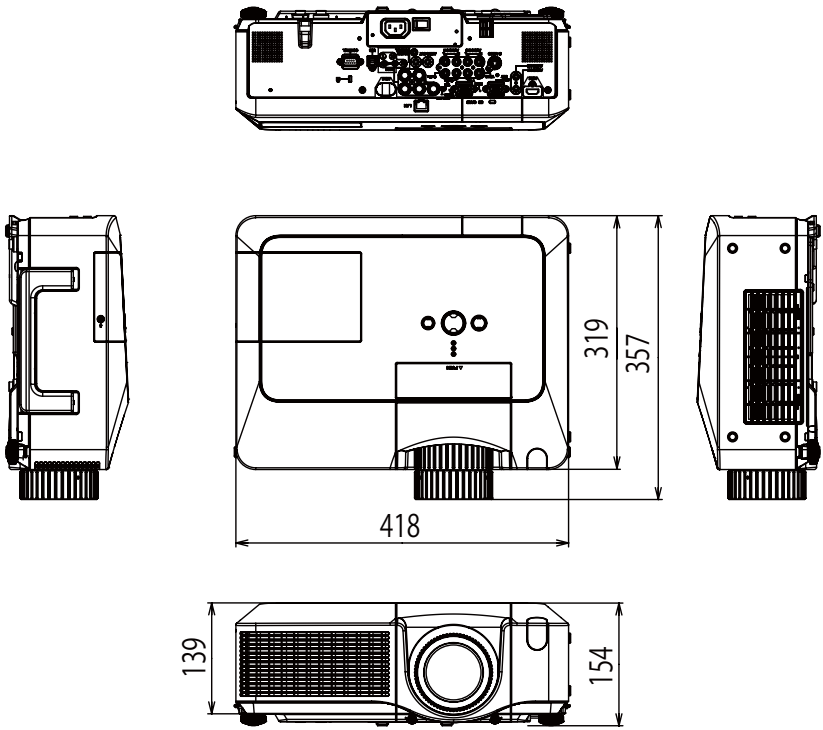
If a problem occurs with the equipment, first refer to the “Troubleshooting” and run through the suggested checks. If this does not resolve the problem, please contact your dealer or service company. They will tell you what warranty condition is applied.

Specifications

Item	Specifications
Product name	Liquid crystal projector
Liquid Crystal Panel	2,304,000 pixels (1920 horizontal x 1200 vertical)
Lamp	275 W UHB
Audio output	4 W x 2
Power supply	AC 100-120 V / 5.0 A, AC 220-240 V / 2.1 A
Power consumption	460 W
Temperature range	5 ~ 35 °C (Operating)
Size	418 (W) x 139 (H) x 357 (D) mm (Not including protruding parts) * Please refer to the following figure.
Weight (mass)	7.3 kg (approx.)
Ports	RGB1 ..... D-sub 15 pin mini x 1 RGB2 G/Y, B/C_B/P_B, R/C_R/P_R, H, V ..... BNC x 5 S-VIDEO ..... mini DIN 4 pin x 1 VIDEO ..... RCA x 1 Y, C_B/P_B, C_R/P_R (component video) ..... RCA x 3 HDMI ..... HDMI x 1 AUDIO IN1 ..... Stereo mini x 1 AUDIO IN2 ..... Stereo mini x 1 AUDIO IN3 R/L ..... RCA x 1 AUDIO IN4 R/L ..... RCA x 1 RGB OUT ..... D-sub 15 pin mini x 1 AUDIO OUT ..... Stereo mini x 1 USB ..... USB (B) x 1 REMOTE CONTROL ..... Stereo mini x 1 CONTROL ..... D-sub 9 pin x 1 LAN ..... RJ45 x 1
Optional parts	**Lamp:** DT00873 **Air filter:** MU05661 * For more information, please consult your dealer.

NOTE • These specifications are subject to change without notice.

Specifications (continued)

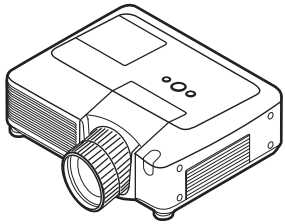


[unit: mm]

Projector

CP-WUX645N

User's Manual (detailed)
Network Guide



Thank you for purchasing this projector.
This projector has the network function that brings you the following main features.

- ✓ **Web control**
  The projector can be controlled and monitored by a web browser software on your PC, which can help you to setup and maintain the projector.
- ✓ **MY IMAGE (Still Image Transfer) Display**
  The projector can display still images that are transferred via the network.

This manual is only intended to explain Network function only.
For safety, operations or any other issues, refer to the Safety Guide and User's Manual (concise and detailed).

⚠**WARNING** ►Before using this product, be sure to read all manuals for this product.
After reading them, store them in a safe place for future reference.

NOTE • The information in this manual is subject to change without notice.
• The manufacturer assumes no responsibility for any errors that may appear in this manual.
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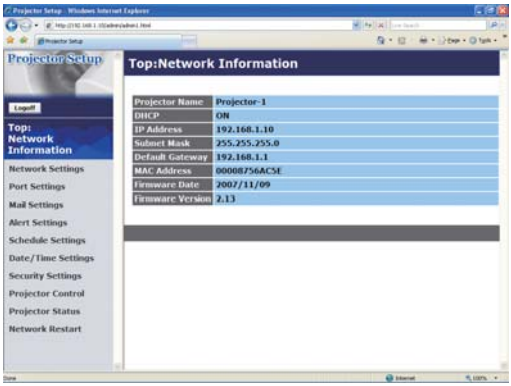
Contents

Contents **2**
1. Main functions **3**
1.1 Configuring and controlling via a web browser 3
1.2 MY IMAGE (Still image Transfer) Display 3
2. Equipment connection and network setting **4**
2.1 Required equipment preparation 4
2.2 Manual network connection setting 5
2.2.1 Equipments connection 5
2.2.2 Network settings 5
2.2.3 “Internet Option” setting 8
2.2.4 Check connection 9
3. Management with Web browser software **10**
3.1 Configuring and controlling the projector via a web browser 11
3.1.1 Logon 13
3.1.2 Network Information 14
3.1.3 Network Settings 15
3.1.4 Port Settings 16
3.1.5 Mail Settings 17
3.1.6 Alert Settings 18
3.1.7 Schedule Settings 20
3.1.8 Date/Time Settings 22
3.1.9 Security Settings 24
3.1.10 Projector Control 26
3.1.11 Projector Status 30
3.1.12 Network Restart 31
3.1.13 Logoff 31
3.2 E-mail Alerts 32
3.3 Projector Management using SNMP 34
3.4 Event Scheduling 35
3.5 MY IMAGE (Still Image Transfer) Display 38
3.6 Command Control via the Network 40

1. Main functions

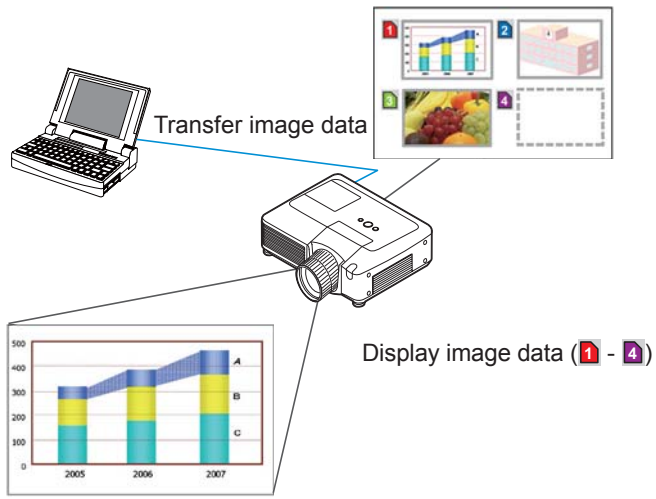
1.1 Configuring and controlling via a web browser

You can adjust or control the projector via a network from a web browser on a PC that is connected to the same network.
Logon the network from the web browser and it offers the menus to configure the network settings, monitor the projector and so on.



1.2 MY IMAGE (Still image Transfer) Display

Image files can be sent via the network, and up to 4 image data can be stored in the projector and displayed on screen one by one. (📖38)



2. Equipment connection and network setting

2.1 Required equipment preparation

The following equipments are required to connect the projector to your PC through the network.

PC : 1) equipped with the network feature
2) installed a web browser software (*11*)

LAN cable : CAT-5 or greater

NOTE • The system for using the network function of the projector requires communication environment conforming 100Base-TX or 10Base-T.

2.2 Manual network connection setting

2.2.1 Equipments connection

Connect the projector and PC with a LAN cable.
* Before connecting with an existing network, contact the network administrator.

Next, please check the PC setting as explained below.

2.2.2 Network settings

This is the explanation of network connection settings for Windows XP and Internet Explorer.
1) Log on to Windows XP as administrator authority. (*)
2) Open “Control Panel” from “Start” menu.
3) Open “Network and Internet Connections” in “Control Panel”. (Fig. 2.2.2.a)
* Administrator authority is the account, which can access to all functions.

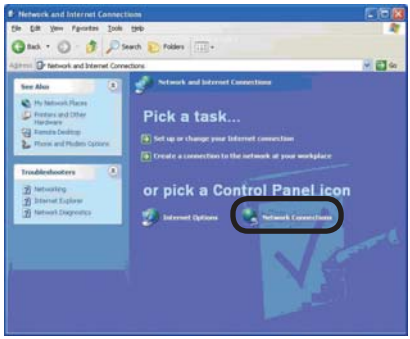


Fig. 2.2.2.a “Network and Internet Connections” window

4) Open “Network Connections”. (Fig.2.2.2.b)

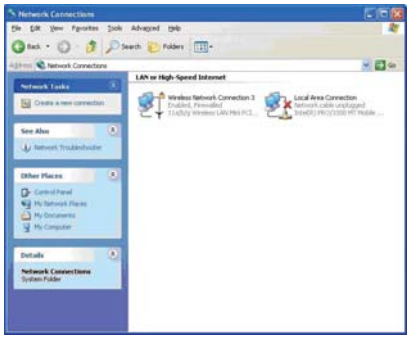


Fig. 2.2.2.b “Network Connections” window

2.2 Manual network connection setting (continued)

5) Open “Local Area Connection Properties” window you use for network device. (Fig. 2.2.2.c)

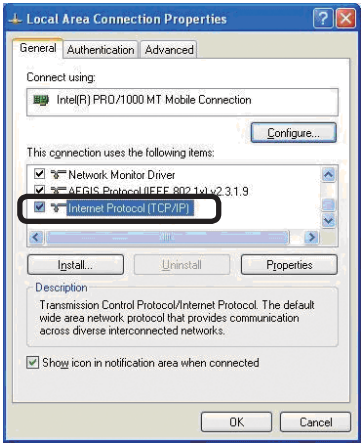


Fig. 2.2.2.c “Local Area Connection Properties” window

6) Set used protocol as “TCP/IP” and open “Internet Protocol (TCP/IP) Properties” window.

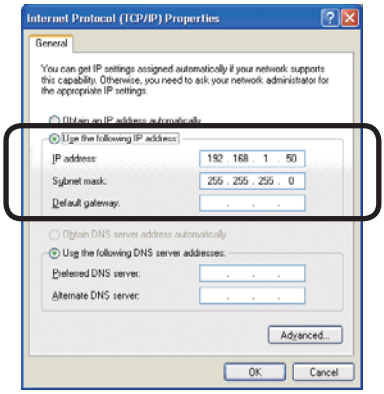

Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Use the following IP address:
IP address:
192 . 168 . 1 . 50
Subnet mask:
255 . 255 . 255 . 0
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Advanced...
OK
Cancel

Fig. 2.2.2.d “Internet Protocol (TCP/IP) Properties” window

7) Set IP address, subnet mask and default gateway for PC.

2.2 Manual network connection setting (continued)

[About IP address]

■ Setting manually

The Network address portion included in the IP address set into your PC should be common with projector's one. And the entire IP address in the PC should not be overlapped with other equipments in the same network, including the projector.

For example

The projector's initial settings are as follows.

IP address: 192.168.1.10
Subnet mask: 255.255.255.0
(Network address: 192.168.1 in this case)

Therefore, specify PC's IP address as follows.

IP address: 192.168.1.xxx (xxx shows decimal number.)
Subnet mask: 255.255.255.0
(Network address: 192.168.1 in this case)

Select from 1 to 254 for "xxx" not duplicating with any other equipments. In this case, projector has "192.168.1.10" IP address, specify from 1 to 254 except 10 for PC.

NOTE • "0.0.0.0" cannot be set to the IP address.
• The projector's IP address can be changed by using the configuration utility via a web browser. (📖*11*)
• If the projector and PC exist in the same network (i.e. network address is common), default gateway can be blank.
• When the projector and PC exist in different networks, default gateway setting is necessary. Contact the network administrator in detail.

■ Setting automatically

When DHCP server exists in network, it is possible to assign IP address to the projector and PC automatically.

* DHCP is abbreviation for "Dynamic Host Configuration Protocol" and has the function to provide necessary setting for network like IP address from server to client. A server that has DHCP function is called DHCP server.

2.2 Manual network connection setting (continued)

2.2.3 “Internet Option” setting

1) Click “Internet Options” in “Network and Internet Connections” window (Fig. 2.2.3.a) to open “Internet Properties” window. (Fig.2.2.3.b)

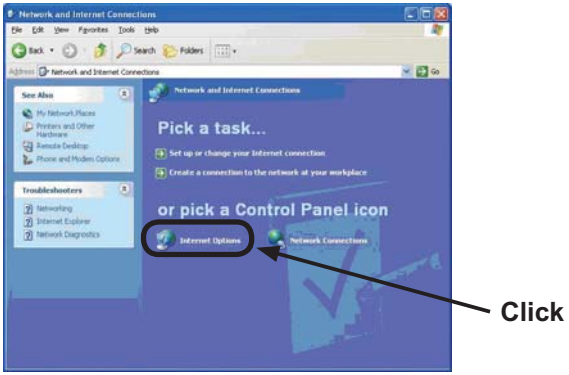


Fig. 2.2.3.a “Network and Internet Connections” window

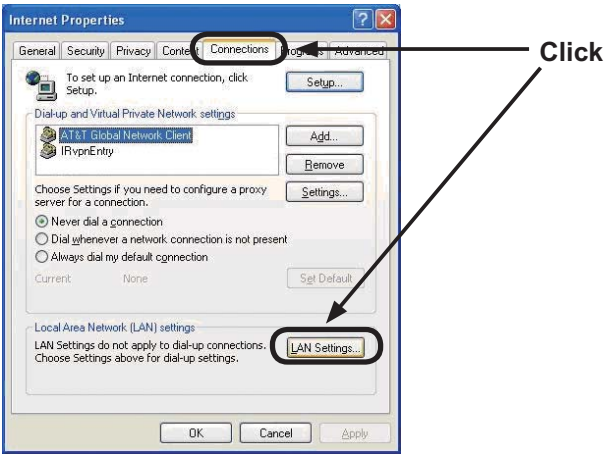


Fig. 2.2.3.b “Internet Properties” window

2) Click “Connections” tab and then click [LAN Settings] button to open “Local Area Network (LAN) settings”. (Fig. 2.2.3.c)

2.2 Manual network connection setting (continued)

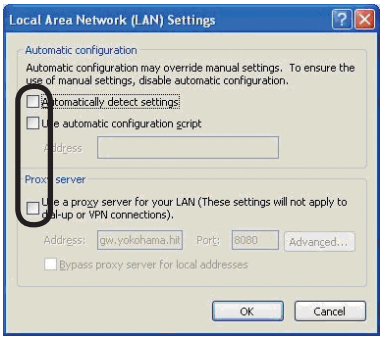

Local Area Network (LAN) Settings
Automatic configuration
Automatic configuration may override manual settings. To ensure the use of manual settings, disable automatic configuration.
Automatically detect settings
Use automatic configuration script
Address
Proxy server
Use a proxy server for your LAN (These settings will not apply to dial-up or VPN connections).
Address: gw.yokohama.hit Port: 8080 Advanced...
Bypass proxy server for local addresses
OK
Cancel

Fig. 2.2.3.c “Local Area Network (LAN) Settings” window

3) Uncheck all boxes in “Local Area Network (LAN) Settings” window. (Fig. 2.2.3.c)

2.2.4 Check connection

Check PC and projector are connected properly here. If it is not connected, check cable connections and settings are properly or not.

1) Start browser in PC and specify following URL, then click “➔” button.

URL: http:///(Projector IP address)/

For example, if projector IP address is 192.168.1.10, specify

URL: http://192.168.1.10/

2) If Fig. 2.2.4 appears, it succeeds.

Fig. 2.2.4 “Logon Menu”

3. Management with Web browser software

This projector is equipped with the following network functions by using a web browser software.

Configuring and Controlling the Projector via a Web Browser

You can change the settings of or control the projector via a network by using a web browser from a PC that is connected to the same network.
(📖*11*)

E-mail Alerts

The projector can automatically send an alert to specified e-mail addresses when the projector requires maintenance or has encountered an error.
(📖*32*)

Projector Management using SNMP

This projector is SNMP (Simple Network Management Protocol) compliant, allowing you to monitor it from a remote location using SNMP software. In addition, the projector is able to send failure & warning alerts to a specified PC.
(📖*34*)

Event Scheduling

You can schedule the projector to perform various functions according to the date and time.
(📖*35*)

MY IMAGE (Still Image Transfer) Display

The projector can display still images that are transferred via the network.
(📖*38*)

Command Control via the Network

The projector can be controlled using RS-232C commands over a network.
(📖*40*)

3.1 Configuring and controlling the projector via a web **browser**

You can adjust or control the projector via a network from a web browser on a PC that is connected to the same network.

NOTE • Internet Explorer 5.5 or later is required.
• If JavaScript is disabled in your web browser configuration, you must enable JavaScript in order to use the projector web pages properly. See the Help files for your web browser for details on how to enable JavaScript.
• You can communicate using SSL (Secure Socket Layer) if you are using Windows XP Service Pack 2 or earlier versions of Microsoft Windows. Please specify “https://” when you enter the IP address of the projector on the web browser. You can't communicate the projector using SSL on Windows Vista.
• It is recommended that all web browser updates are installed. It is especially recommended that all users running Internet Explorer on a Microsoft Windows version prior to Windows XP Service Pack 2 install security update Q832894 (MS04-004) or the web browser interface may not be displayed correctly. And when using an earlier version of Internet Explorer, during operations the browser will log out after 50 seconds.

3.1 Configuring and controlling the projector via a web browser (continued)

When configuring or controlling the projector via a web browser, an ID and password are required. There are two types of IDs, Administrator ID and User ID. The following chart describes the differences between Administrator and User IDs.

Item	Description	Administrator	User
Network Information	Displays the projector's current network configuration settings.	√	√
Network Settings	Displays and configures network settings.	√	N/A
Port Settings	Displays and configures communication port settings.	√	N/A
Mail Settings	Displays and configures e-mail addressing settings.	√	N/A
Alert Settings	Displays and configures failure & warning alerts.	√	N/A
Schedule Settings	Displays and configures schedule settings.	√	N/A
Date/Time Settings	Displays and configures the date and time settings.	√	N/A
Security Settings	Displays and configures passwords and other security settings.	√	N/A
Projector Control	Controls the projector.	√	√
Projector Status	Displays the current projector status.	√	√
Network Restart	Restarts the projector's network connection.	√	N/A

3.1 Configuring and controlling the projector via a web browser (continued)

3.1.1 Logon

Refer to the following for configuring or controlling the projector via a web browser.

Example: If the IP address of the projector is set to **192.168.1.10:**

1) Enter **"http://192.168.1.10/"** into the address bar of the web browser and press "Enter" key or click "➔" button. The screen in Fig. 3.1.1a will be displayed.

2) Enter your ID and password and click **[Logon]**.

Fig. 3.1.1 a "Logon Menu"

Below are the factory default settings for Administrator ID, User ID and passwords.

Item	ID	Password
Administrator	Administrator	<blank>
User	User	<blank>

If the logon is successful, either the Fig. 3.1.1 b or Fig. 3.1.1 c screen will be displayed.

Main menu

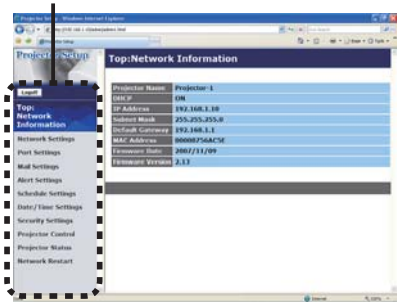


Fig. 3.1.1 b "Logon with Administrator ID"

Main menu

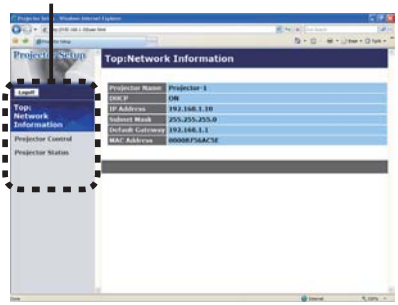


Fig. 3.1.1 c "Logon with User ID"

3) Click the desired operation or configuration item on the main menu located on the left-hand side of the screen.

3.1 Configuring and controlling the projector via a web browser (continued)

3.1.2 Network Information

All screen drawings in this manual are shown when you logon with the Administrator ID. Any functions that are available only for the Administrator will not be shown when you logon with the User ID. Refer to the table. (📖*12, 13*)

Displays the projector's current network configuration settings.

Item	Description
Projector Name	Displays the projector name settings.
DHCP	Displays the DHCP configuration settings.
IP Address	Displays the current IP address.
Subnet Mask	Displays the subnet mask.
Default Gateway	Displays the default gateway.
MAC Address	Displays the ethernet MAC address.
Firmware Date	Displays the network firmware time stamp. This information is only displayed when logged on using an Administrator ID.
Firmware Version	Displays the network firmware version number. This information is only displayed when logged on using an Administrator ID.

3.1 Configuring and controlling the projector via a web browser (continued)

3.1.3 Network Settings

Displays and configures network settings.

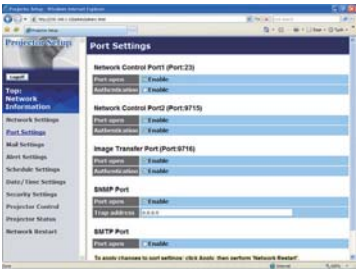
Item	Description
IP Configuration	Configures network settings.
DHCP ON	Enables DHCP.
DHCP OFF	Disables DHCP.
IP Address	Configures the IP address when DHCP is disabled.
Subnet Mask	Configures the subnet mask when DHCP is disabled.
Default Gateway	Configures the default gateway when DHCP is disabled.
Projector Name	Configures the name of the projector. The length of the Projector Name can be up to 64 alphanumeric characters. Only alphabets, numbers and following symbols can be used. !"#$%&'()*+,-./:;<=>?@ [\]^_`{|}~ and space
sysLocation (SNMP)	Configures the location to be referred to when using SNMP. The length of the sysLocation can be up to 255 alphanumeric characters. Only numbers '0-9' and alphabet 'a-z', 'A-Z' can be used.
sysContact (SNMP)	Configures the contact information to be referred to when using SNMP. The length of the sysContact can be up to 255 alphanumeric characters. Only numbers '0-9' and alphabet 'a-z', 'A-Z' can be used.
DNS Server Address	Configures the DNS server address.

Click **[Apply]** button to save the settings.

NOTE • The new configuration settings are activated after restarting the network connection. When the configuration settings are changed, you must restart the network connection. You can restart the network connection by clicking **[Network Restart]** on the main menu.
• If you connect the projector to an existing network, consult a network administrator before setting server addresses.

3.1 Configuring and controlling the projector via a web browser (continued)

3.1.4 Port Settings



Displays and configures communication port settings.

Item		Description
Network Control Port1 (Port:23)		Configures command control port 1 (Port:23).
	Port open	Click **[Enable]** check box to use port 23.
	Authentication	Click **[Enable]** check box when authentication is required for this port.
Network Control Port2 (Port:9715)		Configures command control port 2 (Port:9715).
	Port open	Click **[Enable]** check box to use port 9715.
	Authentication	Click **[Enable]** check box when authentication is required for this port.
Image Transfer Port (Port:9716)		Configures the image transfer port (Port:9716).
	Port open	Click the **[Enable]** check box to use port 9716.
	Authentication	Click the **[Enable]** check box when authentication is required for this port.
SNMP Port		Configures the SNMP port.
	Port open	Click **[Enable]** check box to use SNMP.
	Trap address	Configures the destination of the SNMP Trap in IP format. • The address allows not only IP address but also domain name if the valid DNS server is setup in the **Network Settings**. The maximum length of host or domain name is up to 255 characters.
SMTP Port		Configures the SMTP port.
	Port open	Click **[Enable]** check box to use the e-mail function.

Click **[Apply]** button to save the settings.

NOTE • The new configuration settings are activated after restarting the network connection. When the configuration settings are changed, you must restart the network connection. You can restart the network connection by clicking **[Network Restart]** on the main menu.

3.1 Configuring and controlling the projector via a web browser (continued)

3.1.5 Mail Settings

Displays and configures e-mail addressing settings.

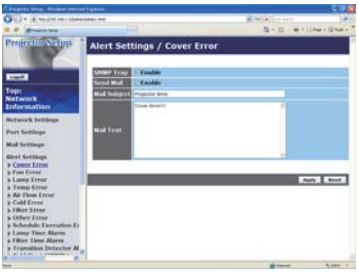
Item	Description
Send mail	Click **[Enable]** check box to use the e-mail function. Configure the conditions for sending e-mail under the Alert Settings.
SMTP Server IP Address	Configures the address of the mail server in IP format. • The address allows not only IP address but also domain name if the valid DNS server is setup in the **Network Settings**. The maximum length of host or domain name is up to 255 characters.
Sender E-mail address	Configures the sender e-mail address. The length of the sender e-mail address can be up to 255 alphanumeric characters.
Recipient E-mail address	Configures the e-mail address of up to five recipients. You can also specify **[TO]** or **[CC]** for each address. The length of the recipient e-mail address can be up to 255 alphanumeric characters.

Click **[Apply]** button to save the settings.

NOTE • You can confirm whether the mail settings work correctly using **[Send Test Mail]** button. Please enable Send mail setting before clicking **[Send Test Mail]**.
• If you connect the projector to an existing network, consult a network administrator before setting server addresses.

3.1 Configuring and controlling the projector via a web browser (continued)

3.1.6 Alert Settings



Displays and configures failure & alert settings.

Item	Description
Cover Error	The lamp cover has not been properly fixed.
Fan Error	The cooling fan is not operating.
Lamp Error	The lamp does not light, and there is a possibility that interior portion has become heated.
Temp Error	There is a possibility that the interior portion has become heated.
Air Flow Error	The internal temperature is rising.
Cold Error	There is a possibility that the interior portion has become overcooled.
Filter Error	Filter time over.
Other Error	Other error. If displaying this error, please contact your dealer.
Schedule Execution Error	Schedule Execution error. (📖***20***)
Lamp Time Alarm	Lamp time over Alarm Time setting.
Filter Time Alarm	Filter time over Alarm Time setting.
Transition Detector Alarm	Transition Detector Alarm. (📖***OPTION Menu in the User's Manual (detailed) – Operating Guide***)
Cold Start	The Power switch is turned on. (Off → standby mode)
Authentication Failure	The SNMP access is detected from the invalid SNMP community.

Refer to ***"Troubleshooting" in the User's Manual (detailed) – Operating Guide*** for further detailed explanation of Error except Other Error and Schedule Execution Error.

3.1 Configuring and controlling the projector via a web browser (continued)

The Alert Items are shown below.

Item	Description
Alarm Time	Configures the time to alert. (Only **Lamp Time Alarm** and **Filter Time Alarm**.)
SNMP Trap	Click **[Enable]** check box to enable SNMP Trap alerts.
Send Mail	Click **[Enable]** check box to enable e-mail alerts. (Except **Cold Start** and **Authentication Failure**.)
Mail Subject	Configures the subject line of the e-mail to be sent. The length of the subject line can be up to 100 alphanumeric characters. (Except **Cold Start** and **Authentication Failure**.)
Mail Text	Configures the text of the e-mail to be sent. The length of the text can be up to 1024 alphanumeric characters. (Except **Cold Start** and **Authentication Failure**.)

Click **[Apply]** button to save the settings.

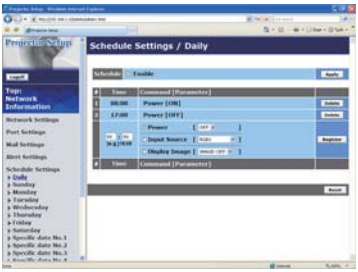
NOTE • The trigger of **Filter Error** e-mail is depending on the FILTER MESSAGE setting in the SERVICE item of the OPTION Menu which defines the period until the filter message is displayed on the projector screen. The e-mail will be sent when the filter timer exceeds 500, 1000, 1500 or 2000 hours based on the configuration. No notification e-mail will be sent if the FILTER MESSAGE is set to TURN OFF. (📖***OPTION Menu in the User's Manual (detailed) – Operating Guide***)

• **Lamp Time Alarm** is defined as a threshold for e-mail notification (reminder) of the lamp timer. When the lamp hour exceeds this threshold that is configured through the Web page, the e-mail will be sent out.

• **Filter Time Alarm** is defined as a threshold for e-mail notification (reminder) of the filter timer. When the filter hour exceeds this threshold, the e-mail will be sent out.

3.1 Configuring and controlling the projector via a web browser (continued)

3.1.7 Schedule Settings



Displays and configures schedule settings.

Item	Description
Daily	Configures the daily schedule.
Sunday	Configures the Sunday schedule.
Monday	Configures the Monday schedule.
Tuesday	Configures the Tuesday schedule.
Wednesday	Configures the Wednesday schedule.
Thursday	Configures the Thursday schedule.
Friday	Configures the Friday schedule.
Saturday	Configures the Saturday schedule.
Specific date No.1	Configures the specific date (No.1) schedule.
Specific date No.2	Configures the specific date (No.2) schedule.
Specific date No.3	Configures the specific date (No.3) schedule.
Specific date No.4	Configures the specific date (No.4) schedule.
Specific date No.5	Configures the specific date (No.5) schedule.

3.1 Configuring and controlling the projector via a web browser (continued)

The schedule settings are shown below.

Item	Description
Schedule	Click **[Enable]** check box to enable the schedule.
Date (Month/Day)	Configures the month and date. This item appears only when Specific date (No. 1-5) is selected.

Click **[Apply]** button to save the settings.

The current event settings are displayed on the schedule list. To add additional functions and events, set the following items.

Item		Description
Time		Configures the time to execute commands.
Command [Parameter]		Configures the commands to be executed.
	Power	Configures the parameters for power control.
	Input Source	Configures the parameters for input switching.
	Display Image	Configures the parameters for display of transfered image data (📖38).

Click **[Register]** button to add new commands to the schedule list.

Click **[Delete]** button to delete commands from the schedule list.

Click **[Reset]** button to delete all commands and reset the schedule settings from the schedule list.

NOTE • After the projector is moved, check the date and time set for the projector before configuring the schedules. Strong shock may make the date and time settings (📖22) get out of tune.

3.1 Configuring and controlling the projector via a web browser (continued)

3.1.8 Date/Time Settings

Displays and configures the date and time settings.

Item			Description
Current Date			Configures the current date in **year/month/day** format.
Current Time			Configures the current time in **hour:minute:second** format.
Daylight Savings Time			Click **[ON]** check box to enable daylight savings time and set the following items.
	Start		Configures the date and time daylight savings time begins.
		Month	Configures the month daylight savings time begins (1~12).
		Week	Configures the week of the month daylight savings time begins (First, 2, 3, 4, Last).
		Day	Configures the day of the week daylight savings time begins (Sun, Mon, Tue, Wed, Thu, Fri, Sat).
		Time **hour**	Configures the hour daylight savings time begins (0 ~ 23).
		Time **minute**	Configures the minute daylight savings time begins (0 ~ 59).
	End		Configures the date and time daylight savings time ends.
		Month	Configures the month daylight savings time ends (1 ~ 12).
		Week	Configures the week of the month daylight savings time ends (First, 2, 3, 4, Last).
		Day	Configures the day of the week daylight savings time ends (Sun, Mon, Tue, Wed, Thu, Fri, Sat).
		Time **hour**	Configures the hour daylight savings time ends (0 ~ 23).
		Time **minute**	Configures the minute daylight savings time ends (0 ~ 59).

3.1 Configuring and controlling the projector via a web browser (continued)

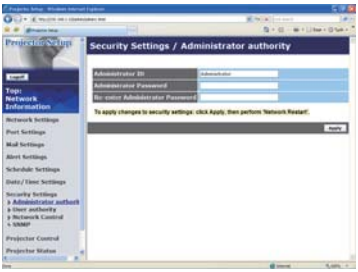
Item		Description
Time difference		Configures the time difference. Set the same time difference as the one set on your PC. If unsure, consult your IT manager.
SNTP		Click the **[ON]** check box to retrieve Date and Time information from the SNTP server and set the following items.
	SNTP Server IP Address	Configures the SNTP server address in IP format. • The address allows not only IP address but also domain name if the valid DNS server is setup in the **Network Settings**. The maximum length of host or domain name is up to 255 characters.
	Cycle	Configures the interval at which to retrieve Date and Time information from the SNTP server (**hour:minute**).

Click **[Apply]** button to save the settings.

NOTE • The new configuration settings are activated after restarting the network connection. When the configuration settings are changed, you must restart the network connection. You can restart the network connection by clicking **[Network Restart]** on the main menu.
• If you connect the projector to an existing network, consult a network administrator before setting server addresses.
• To enable the SNTP function, the time difference must be set.
• The projector will retrieve Date and Time information from the time server and override time settings when SNTP is enabled.
• The internal clock's time may not remain accurate. Using SNTP is recommended to maintain accurate time.

3.1 Configuring and controlling the projector via a web browser (continued)

3.1.9 Security Settings



Displays and configures passwords and other security settings.

Item		Description
Administrator authority		Configures the Administrator ID and password.
	Administrator ID	Configures the Administrator ID. The length of the text can be up to 32 alphanumeric characters.
	Administrator Password	Configures the Administrator password. The length of the text can be up to 255 alphanumeric characters.
	Re-enter Administrator Password	Reenter the above password for verification.
User authority		Configures the User ID and password.
	User ID	Configures the User ID. The length of the text can be up to 32 alphanumeric characters.
	User Password	Configures the User password. The length of the text can be up to 255 alphanumeric characters.
	Re-enter User Password	Reenter the above password for verification.

3.1 Configuring and controlling the projector via a web browser (continued)

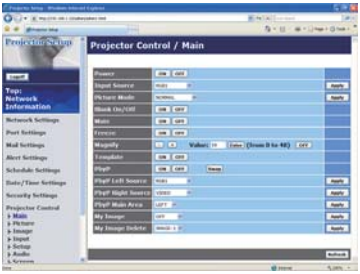
Item		Description
Network Control		Configures the Authentication password for the command control.
	Authentication Password	Configures the Authentication password. The length of the text can be up to 32 alphanumeric characters.
	Re-enter Authentication Password	Reenter the above password for verification.
SNMP		Configures the community name if SNMP is used.
	Community name	Configures the community name. The length of the text can be up to 64 alphanumeric characters.

Click **[Apply]** button to save the settings.

NOTE • The new configuration settings are activated after restarting the network connection. When the configuration settings are changed, you must restart the network connection. You can restart the network connection by clicking **[Network Restart]** on the main menu.
• Only numbers '0-9' and alphabet 'a-z', 'A-Z' can be used.

3.1 Configuring and controlling the projector via a web browser (continued)

3.1.10 Projector Control



The items shown in the table below can be performed using the Projector Control menu. Select an item using the up and down arrow keys on the PC.
Most of the items have a submenu. Refer to the table below for details.

NOTE • The setting value may not match with the actual value if the user changes the value manually. In that case, please refresh the page by clicking **[Refresh]** button.

Controls the projector.

Item		Description
Main		
	Power	Turns the power on/off.
	Input Source	Selects the input source.
	Picture Mode	Selects the picture mode setting.
	Blank On/Off	Turns Blank on/off.
	Mute	Turns Mute on/off.
	Freeze	Turns Freeze on/off.
	Magnify	Controls the magnify setting. In some input signal sources, it might stop “Magnify” even though it does not reach to maximum setting value.
	Template	Turns template on/off.
	P by P	Turns the P by P on/off.
	P by P Left Source	Selects the P by P Left Source setting.
	P by P Right Source	Selects the P by P Right Source setting.
	P by P Main Area	Selects the P by P Main Area Source setting.
	MY Image	Select MY IMAGE data.
	MY Image Delete	Delete MY IMAGE data.

3.1 Configuring and controlling the projector via a web browser (continued)

Item		Description
Picture		
	Brightness	Adjusts the brightness setting.
	Contrast	Adjusts the contrast setting.
	Gamma	Selects the gamma setting.
	Color Temp	Selects the color temperature setting.
	Color	Adjusts the color setting.
	Tint	Adjusts the tint setting.
	Sharpness	Adjusts the sharpness setting.
	Active Iris	Selects the active iris setting.
	MyMemory Save	Saves the MyMemory data.
	MyMemory Recall	Recalls the MyMemory data.
Image		
	Aspect	Selects the aspect setting.
	Over Scan	Adjusts the over scan setting.
	V Position	Adjusts the vertical position.
	H Position	Adjusts the horizontal position.
	H Phase	Adjusts the horizontal phase.
	H Size	Adjusts the horizontal size.
	Auto Adjust Execute	Performs the automatic adjustment.
Input		
	Progressive	Selects the progressive setting.
	Video NR	Selects the video noise reduction setting.
	3D-YCS	Selects the 3D-YCS setting.
	Color Space	Selects the color space.
	Component	Selects the COMPONENT port setting.
	C-Video Format	Selects the video format setting.
	S-Video Format	Selects the s-video format setting.
	HDMI	Selects the HDMI setting.
	Frame Lock-RGB1	Turns the frame lock-RGB1 function on/off.
	Frame Lock-RGB2	Turns the frame lock-RGB2 function on/off.
	Frame Lock-HDMI	Turns the frame lock-HDMI function on/off.
	RGB in-1	Selects the RGB1 input signal type.
	RGB in-2	Selects the RGB2 input signal type.

3.1 Configuring and controlling the projector via a web browser (continued)

Item		Description
Setup		
	Auto Keystone Execute	Performs the automatic keystone distortion setting.
	Keystone V	Adjusts the vertical keystone distortion setting.
	Keystone H	Adjusts the horizontal keystone distortion setting.
	Perfect Fit	Adjusts the shape of the projected image in each of the corners.
	Whisper	Selects the whisper mode.
	Mirror	Selects the mirror status.
	Monitor Out-RGB1	Assigns the MONITOR OUT when the RGB1 input port is selected.
	Monitor Out-RGB2	Assigns the MONITOR OUT when the RGB2 input port is selected.
	Monitor Out-HDMI	Assigns the MONITOR OUT when the HDMI input port is selected.
	Monitor Out-Component	Assigns the MONITOR OUT when the COMPONENT input port is selected.
	Monitor Out-S-Video	Assigns the MONITOR OUT when the S-VIDEO input port is selected.
	Monitor Out-Video	Assigns the MONITOR OUT when the VIDEO input port is selected.
	Monitor Out-Standby	Assigns the MONITOR OUT in the standby mode.
Audio		
	Volume	Adjusts the volume setting.
	Treble	Adjust the Treble setting.
	Bass	Adjusts the Bass setting.
	Speaker	Turns the built-in speaker on/off.
	Audio-RGB1	Assigns the AUDIO-RGB1 input port.
	Audio-RGB2	Assigns the AUDIO-RGB2 input port.
	Audio-HDMI	Assigns the AUDIO-HDMI input port.
	Audio-Component	Assigns the AUDIO-COMPONENT input port.
	Audio-S-Video	Assigns the AUDIO-S-VIDEO input port.
	Audio-Video	Assigns the AUDIO-VIDEO input port.
	Audio Out Standby	Assigns the AUDIO OUT in the standby mode.
	HDMI Audio	Selects the HDMI audio setting.

3.1 Configuring and controlling the projector via a web browser (continued)

Item		Description
Screen		
	Language	Selects the language for the OSD.
	Menu Position V	Adjusts the vertical Menu position.
	Menu Position H	Adjusts the horizontal Menu position.
	Blank	Selects the Blank mode.
	Startup	Selects the startup screen mode.
	MyScreen Lock	Turns MyScreen lock function on/off.
	Message	Turns the message function on/off.
	Template	Selects the template setting.
Option		
	Auto Search	Turns the automatic signal search function on/off.
	Auto Keystone	Turns the automatic keystone distortion correction function on/off.
	Auto on	Turns the auto on function on/off.
	Auto off	Configures the timer to shut off the projector when no signal is detected.
	My Button-1	Assigns the functions for the MY BUTTON1 button on the included remote control.
	My Button-2	Assigns the functions for the MY BUTTON2 button on the included remote control.
	My Source	Selects the My Source setting.
	Remote Receiv. Front	Enable/Disable remote receiv. front.
	Remote Receiv. Rear	Enable/Disable remote receiv. rear.
	Remote Receiv. Top	Enable/Disable remote receiv. top.
	Remote Freq. Normal	Enables/Disables the remote control signal frequency normal.
	Remote Freq. High	Enables/Disables the remote control signal frequency high.
Closed Caption		
	Display	Selects Closed Caption DISPLAY setting.
	Mode	Selects Closed Caption MODE setting.
	Channel	Selects Closed Caption CHANNEL setting.

3.1 Configuring and controlling the projector via a web browser (continued)

3.1.11 Projector Status

Displays the current projector status.

Item	Description
Error Status	Displays the current error status
Lamp Time	Displays the usage time for the current lamp.
Filter Time	Displays the usage time for the current filter.
Power Status	Displays the current power status.
Input Status	Displays the current input signal source.
Blank On/Off	Displays the current Blank on/off status.
Mute	Displays the current Mute on/off status.
Freeze	Displays the current Freeze status.

3.1 Configuring and controlling the projector via a web browser (continued)

3.1.12 Network Restart

Restarts the projector's network connection.

Item	Description
Restart	Restarts the projector's network connection in order to activate new configuration settings.

NOTE • Restarting requires you to re-log on in order to further control or configure the projector via a web browser. Wait 1 minute or more after clicking **[Restart]** button to log on again.
• The Logon menu (*13*) is displayed after restarting the projector's network connection if the DHCP is set to ON.

3.1.13 Logoff

When **[Logoff]** is clicked, the Logon menu is displayed. (*13*)

3.2 E-mail Alerts

The projector can automatically send an alert message to the specified e-mail addresses when the projector detects a certain condition that is requiring maintenance or detected an error.

NOTE • Up to five e-mail addresses can be specified.
• The projector may be not able to send e-mail if the projector suddenly loses power.

Mail Settings (📖17)

To use the projector's e-mail alert function, please configure the following items through a web browser.

Example: If the IP address of the projector is set to **192.168.1.10:**
1) Enter **"http://192.168.1.10/"** into the address bar of the web browser.
2) Enter the Administrator ID and password and click **[Logon]**.
3) Click **[Port Settings]** on the main menu.
4) Click **[Enable]** check box to open the SMTP Port.
5) Click **[Apply]** button to save the settings.

NOTE • A Network Restart is required after the **SMTP Port** configuration settings have changed. Click **[Network Restart]** and configure the following items.

6) Click **[Mail Settings]** and configure each item. Refer to the item **3.1.5 Mail Settings** (📖17) for further information.
7) Click **[Apply]** button to save the settings.

NOTE • Click **[Send Test Mail]** button in **[Mail Settings]** to confirm that the e-mail settings are correct. The following mail will be delivered to the specified addresses.

Subject line	:Test Mail	<Projector name>
Text	:Send Test Mail	
	IP Address	<Projector IP address>
	MAC Address	<Projector MAC address>

3.2 E-mail Alerts (continued)

8) Click **[Alert Settings]** on the main menu to configure the E-mail Alerts settings.
9) Select and configure each alert item. Refer to the item **3.1.6 Alert Settings** (📖*18*) for further information.
10) Click **[Apply]** button to save the settings.

Failure/Warning e-mails are formatted as follows:

Subject line	: <Mail title>	<Projector name>
Text	: <Mail text>	
	Date	<Failure/Warning date>
	Time	<Failure/Warning time>
	IP Address	<Projector IP address>
	MAC Address	<Projector MAC address>

3.3 Projector Management using SNMP

The SNMP (Simple Network Management Protocol) enables to manage the projector information, which is a failure or warning status, from the computer on the network. The SNMP management software will be required on the computer to use this function.

NOTE • It is recommended that SNMP functions be carried out by a network administrator.
• SNMP management software must be installed on the computer to monitor the projector via SNMP.

SNMP Settings (16)

Configure the following items via a web browser to use SNMP.

Example: If the IP address of the projector is set to **192.168.1.10:**
1) Enter **"http://192.168.1.10/"** into the address bar of the web browser.
2) Enter the Administrator ID and Password and click **[Logon]**.
3) Click **[Port Settings]** on the main menu.
4) Click **[Enable]** check box to open the **SNMP Port**. Set the IP address to send the SNMP trap to when a Failure/Warning occurs.

NOTE • A Network Restart is required after the **SNMP Port** configuration settings have been changed. Click **[Network Restart]** and configure the following items.

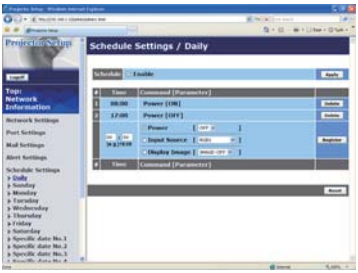
5) Click **[Security Settings]** on the main menu.
6) Click **[SNMP]** and set the community name on the screen that is displayed.

NOTE • A Network Restart is required after the **Community name** has been changed. Click **[Network Restart]** and configure the following items.

7) Configure the settings for Trap transmission of Failures/Warnings. Click **[Alert Settings]** on the main menu and select the Failure/Warning item to be configured.
8) Click **[Enable]** check box to send out the SNMP trap for Failures/Warnings. Clear **[Enable]** check box when SNMP trap transmission is not required.
9) Click **[Apply]** button to save the settings.

3.4 Event Scheduling

The scheduling function enables to setup scheduled events including power on / power off. It enables to be “self-management” projector.



NOTE • You can schedule the following control events: Power ON/OFF, Input Source and Transferred Image Display.
• The power on / off event has the lowest priority among the all events that are defined at the same time.
• There are 3 types of Scheduling, 1) daily 2) weekly 3) specific date. (📖 *20*)
• The priority for scheduled events is as follows 1) specific date 2) weekly 3) daily.
• Up to five specific dates are available for scheduled events. Priority is given to those with the lower numbers when more than one event has been scheduled for the same date and time (e.g., ‘Specific date No. 1’ has priority over ‘Specific date No. 2’ and so on.
• Be sure to set the date and time before enabling scheduled events. (📖 *22*)

3.4 Event Scheduling (continued)

Schedule Settings (📖20)

Schedule settings can be configured from a web browser.

Example: If the IP address of the projector is set to **192.168.1.10:**
1) Enter **"http://192.168.1.10/"** into the address bar of the web browser.
2) Enter the Administrator ID and password and click **[Logon]**.
3) Click **[Schedule Settings]** on the main menu and select the required schedule item. For example, if you want to perform the command every Sunday, please select **[Sunday]**.
4) Click **[Enable]** check box to enable scheduling.
5) Enter the date (month/day) for specific date scheduling.
6) Click **[Apply]** button to save the settings.
7) After configure the time, command and parameters, click **[Register]** to add the new event.
8) Click **[Delete]** button when you want to delete a schedule.

There are three types of scheduling.
1) Daily: Perform the specified operation at a specified time every day.
2) Sunday ~ Saturday: Perform the specified operation at the specified time on a specified day of the week.
3) Specific date: Perform the specified operation on the specified date and time.

NOTE • In Standby mode the power indicator will flash green for approx. 3 seconds when at least 1 "Power ON" schedule is saved.
• When the schedule function is used, the power cord must be connected to the projector and the outlet and the power switch must be turned on, [|]. The schedule function does not work when the power switch is turned off, [O] or the breaker in a room is tripped. The power indicator will lights orange or green when the projector gets is receiving the power.

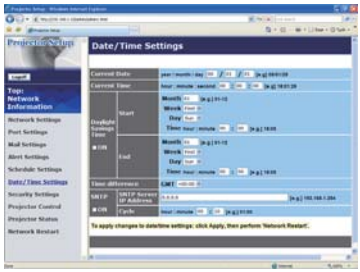
3.4 Event Scheduling (continued)

Date/Time Settings (📖22)

The Date/Time setting can be adjusted via a web browser.

Example: If the IP address of the projector is set to **192.168.1.10:**

1) Enter **"http://192.168.1.10/"** into the address bar of the web browser. Enter the Administrator ID and Password and click **[Logon]**.
2) Click **[Date/Time Settings]** on the main menu and configure each item. Refer to the item **3.1.8 Data/Time Settings** for further information.
3) Click **[Apply]** button to save the settings.



NOTE • A Network Restart is required after the **Daylight Savings Time** or **SNTP** configuration settings have been changed.
• The battery for the built in clock may be dead if the clock loses time even when the date and time have been set correctly. Replace the battery by following ***"Internal clock battery" section of the User's Manual (concise)***.
• The internal clock's time may not remain accurate. Using SNTP is recommended to maintain accurate time.

3.5 MY IMAGE (Still Image Transfer) Display

The projector can display still images that are transferred via the network.

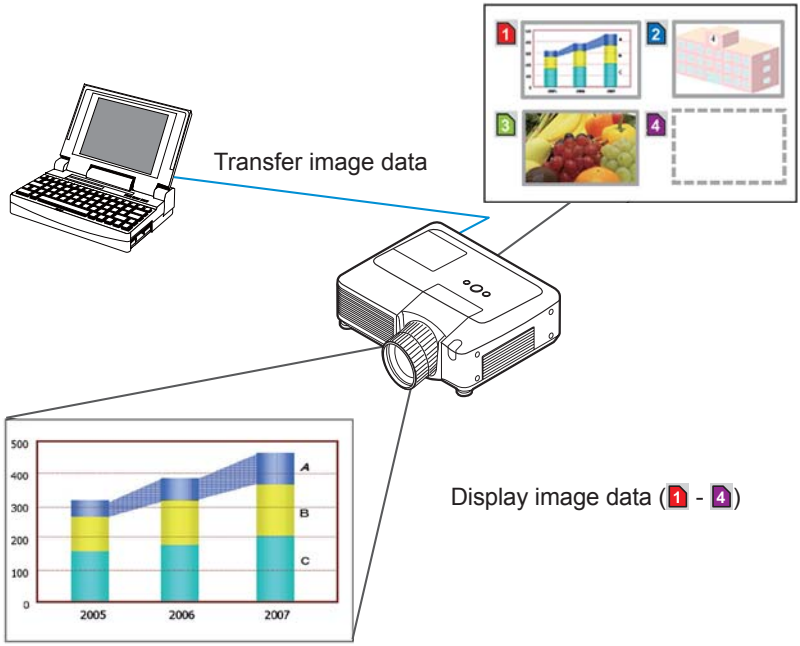


Fig. 3.5 Still Image Transfer

MY IMAGE transmission requires an exclusive application for your PC. You can download it from the web site (http://hitachi.us/digitalmedia or http://www.hitachidigitalmedia.com). Refer to the manual for the application for instructions.

To display the transferred image, select the MY IMAGE item in the NETWORK Menu. For more information, please see the description of the MY IMAGE item of the NETWORK Menu. (📖 ***NETWORK Menu in User's Manual (detailed) – Operating Guide***)

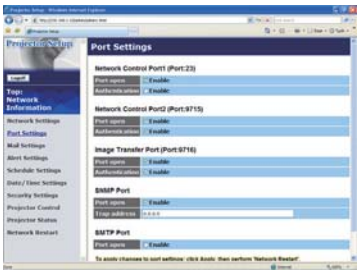
NOTE • It is possible to allocate the image file up to 4 in the maximum.
• The image file also can be displayed by using schedule function from the web browser. Refer to the item ***3.4 Event Scheduling*** (📖***35***) in detail.

3.5 MY IMAGE (Still Image Transfer) Display (continued)

Configure the following items from a web browser when MY IMAGE is used.

Example: If the IP address of the projector is set to **192.168.1.10:**

1) Enter **"http://192.168.1.10/"** into the address bar of the web browser.
2) Enter the Administrator ID and password and click **[Logon]**.
3) Click **[Port Settings]** on the main menu.
4) Click the **[Enable]** check box to open the **Image Transfer Port (Port: 9716)**. Click the **[Enable]** check box for the **[Authentication]** setting when authentication is required, otherwise clear the check box.
5) Click the **[Apply]** button to save the settings.



When the authentication setting is enabled, the following settings are required.

6) Click **[Security Settings]** on the main menu.
7) Select **[Network Control]** and enter the desired authentication password.
8) Click the **[Apply]** button to save the settings.

NOTE • The Authentication Password will be the same for **Network Control Port1 (Port: 23)**, **Network Control Port2 (Port: 9715)**, and **Image Transfer Port (Port: 9716)**.

• The new configuration settings are activated after restarting the network connection. When the configuration settings are changed, you must restart the network connection. You can restart the network connection by clicking **[Network Restart]** on the main menu.

3.6 Command Control via the Network

You can configure and control the projector via the network using RS-232C commands.

Communication Port

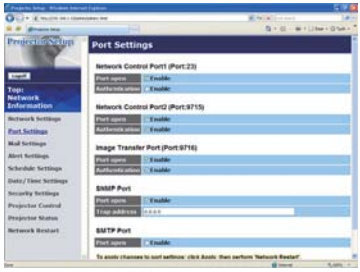
The following two ports are assigned for the command control.
TCP #23
TCP #9715

NOTE • Command control is not available via communication port (TCP #9716) (📖*16*) that is used for the MY IMAGE transmission function.

Command Control Settings (📖*16*)

Configure the following items from a web browser when command control is used.

Example: If the IP address of the projector is set to **192.168.1.10:**
1) Enter **"http://192.168.1.10/"** into the address bar of the web browser.
2) Enter the Administrator ID and password and click **[Logon]**.
3) Click **[Port Settings]** on the main menu.



4) Click **[Enable]** check box to open **Network Control Port1 (Port: 23)** to use TCP #23. Click **[Enable]** check box for **[Authentication]** setting when authentication is required, otherwise clear the check box.
5) Click **[Enable]** check box to open **Network Control Port2 (Port: 9715)** to use TCP #9715. Click **[Enable]** check box for **[Authentication]** setting when authentication is required, otherwise clear the check box.
6) Click **[Apply]** button to save the settings.

3.6 Command Control via the Network (continued)

When the authentication setting is enabled, the following settings are required. (📖*24*)

7) Click **[Security Settings]** on the main menu.
8) Click **[Network Control]** and enter the desired authentication password.
   * See NOTE.
9) Click **[Apply]** button to save the settings.

NOTE • The Authentication Password will be the same for **Network Control Port1 (Port: 23), Network Control Port2 (Port: 9715)**, and **Image Transfer Port (Port: 9716)**.
• The new configuration settings are activated after restarting the network connection. When the configuration settings are changed, you must restart the network connection. You can restart the network connection by clicking **[Network Restart]** on the main menu.

3.6 Command Control via the Network (continued)

Command Format

Command formats differ among the different communication ports.

- TCP #23

  You can use the RS-232C commands without any changes. The reply data format is the same as the RS-232C commands. However, the following reply will be sent back in the event of authentication failure when authentication is enabled.

  <Reply in the event of an authentication error>

Reply	Error code	
0x1F	0x04	0x00

- TCP #9715

  Send Data format

  The following formatting is added to the header (0x02), Data length (0x0D), Checksum (1byte) and Connection ID (1 byte) of the RS-232C commands.

Header	Data length	RS-232C command	Check Sum	Connection ID
0x02	0x0D	13 bytes	1 byte	1 byte

Header → 0x02, Fixed
Data length → RS-232C commands byte length (0x0D, Fixed)
RS-232C commands → RS-232C commands that start with 0xBE 0xEF (13 bytes)
Check Sum → This is the value to make zero on the addition of the lower 8 bits from the header to the checksum.
Connection ID → Random value from 0 to 255 (This value is attached to the reply data)

3.6 Command Control via the Network (continued)

Reply Data format

The connection ID (the data is same as the connection ID data on the sending data format) is attached to the RS-232C commands reply data.

<ACK reply>

Reply	Connection ID
0x06	1 byte

<NAK reply>

Reply	Connection ID
0x15	1 byte

<Error reply>

Reply	Error code	Connection ID
0x1C	2 bytes	1 byte

<Data reply>

Reply	Data	Connection ID
0x1D	2 bytes	1 byte

<Projector busy reply>

Reply	Status code	Connection ID
0x1F	2 bytes	1 byte

<Authentication error reply>

Reply	Authentication Error code		Connection ID
0x1F	0x04	0x00	1 byte

3.6 Command Control via the Network (continued)

Automatic Connection Break

The TCP connection will be automatically disconnected after there is no communication for 30 seconds after being established.

Authentication

The projector does not accept commands without authentication success when authentication is enabled. The projector uses a challenge response type authentication with an MD5 (Message Digest 5) algorithm.
When the projector is using a LAN, a random 8 bytes will be returned if authentication is enabled. Bind this received 8 bytes and the Authentication Password and digest this data with the MD5 algorithm and add this in front of the commands to send.

Following is a sample if the Authentication Password is set to “password” and the random 8 bytes are “a572f60c”.

1) Select the projector.
2) Receive the random 8 bytes “a572f60c” from the projector.
3) Bind the random 8 bytes “a572f60c” and the Authentication Password “password” and it becomes “a572f60cpassword”.
4) Digest this bind “a572f60cpassword” with MD5 algorithm.
   It will be “e3d97429adffa11bce1f7275813d4bde”.
5) Add this “e3d97429adffa11bce1f7275813d4bde” in front of the commands and send the data.
   Send “e3d97429adffa11bce1f7275813d4bde”+command.
6) When the sending data is correct, the command will be performed and the reply data will be returned. Otherwise, an authentication error will be returned.

NOTE • As for the transmission of the second or subsequent commands, the authentication data can be omitted when the same connection.

Projector

CP-WUX645N

User's Manual – Operating Guide Technical

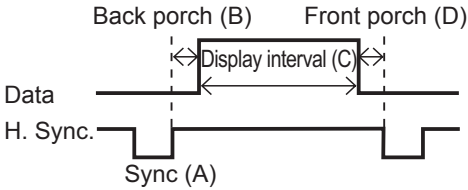
Example of computer signal

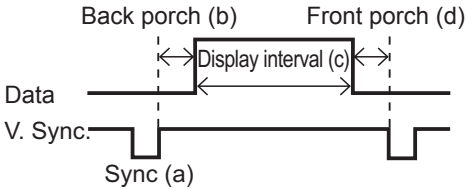
Resolution (H x V)	H. frequency (kHz)	V. frequency (Hz)	Rating	Signal mode
720 x 400	37.9	85.0	VESA	TEXT
640 x 480	31.5	59.9	VESA	VGA (60Hz)
640 x 480	37.9	72.8	VESA	VGA (72Hz)
640 x 480	37.5	75.0	VESA	VGA (75Hz)
640 x 480	43.3	85.0	VESA	VGA (85Hz)
800 x 600	35.2	56.3	VESA	SVGA (56Hz)
800 x 600	37.9	60.3	VESA	SVGA (60Hz)
800 x 600	48.1	72.2	VESA	SVGA (72Hz)
800 x 600	46.9	75.0	VESA	SVGA (75Hz)
800 x 600	53.7	85.1	VESA	SVGA (85Hz)
832 x 624	49.7	74.5		Mac 16” mode
1024 x 768	48.4	60.0	VESA	XGA (60Hz)
1024 x 768	56.5	70.1	VESA	XGA (70Hz)
1024 x 768	60.0	75.0	VESA	XGA (75Hz)
1024 x 768	68.7	85.0	VESA	XGA (85Hz)
1152 x 864	67.5	75.0	VESA	1152 x 864 (75Hz)
1280 x 960	60.0	60.0	VESA	1280 x 960 (60Hz)
1280 x 1024	64.0	60.0	VESA	SXGA (60Hz)
1280 x 1024	80.0	75.0	VESA	SXGA (75Hz)
*1280 x 1024	91.1	85.0	VESA	SXGA (85Hz)
*1600 x 1200	75.0	60.0	VESA	UXGA (60Hz)
1280 x 768	47.7	60.0	VESA	W-XGA (60Hz)
1680 x 1050	65.3	60.0	VESA	WSXGA+(60Hz)
1280 x800	83.5	60.0	VESA	1280 x 800 (60Hz)
1920 x1200	74.0	60.0	VESA	W-UXGA(60Hz) Reduced Blanking

NOTE • Be sure to check jack type, signal level, timing and resolution before connecting this projector to a computer.
• Some computers may have multiple display screen modes. Use of some of these modes will not be possible with this projector.
• Depending on the input signal, full-size display may not be possible in some cases. Refer to the number of display pixels above.
• Although the projector can display signals with resolution up to WUXGA (1920x1200), the signal will be converted to the projector’s panel resolution before being displayed. The best display performance will be achieved if the resolutions of the input signal and projector panel are identical.
• Automatic adjustment may not function correctly with some input signals.
• The image may not be displayed correctly when the input sync signal is a composite sync or a sync on G.
• The HDMI input does not support the signals marked with *.

Initial set signals

The following signals are used for the initial settings. The signal timing of some computer models may be different. In such case, adjust the items V POSITION and H POSITION in the IMAGE menu.

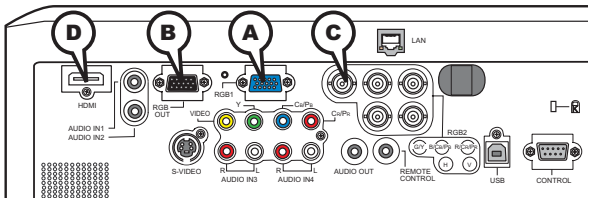




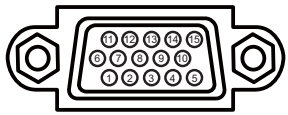
Computer/ Signal	Horizontal signal timing (µs)			
	(A)	(B)	(C)	(D)
TEXT	2.0	3.0	20.3	1.0
VGA (60Hz)	3.8	1.9	25.4	0.6
VGA (72Hz)	1.3	4.1	20.3	0.8
VGA (75Hz)	2.0	3.8	20.3	0.5
VGA (85Hz)	1.6	2.2	17.8	1.6
SVGA (56Hz)	2.0	3.6	22.2	0.7
SVGA (60Hz)	3.2	2.2	20.0	1.0
SVGA (72Hz)	2.4	1.3	16.0	1.1
SVGA (75Hz)	1.6	3.2	16.2	0.3
SVGA (85Hz)	1.1	2.7	14.2	0.6
Mac 16" mode	1.1	3.9	14.5	0.6
XGA (60Hz)	2.1	2.5	15.8	0.4
XGA (70Hz)	1.8	1.9	13.7	0.3
XGA (75Hz)	1.2	2.2	13.0	0.2
XGA (85Hz)	1.0	2.2	10.8	0.5
1152 x 864 (75Hz)	1.2	2.4	10.7	0.6
1280 x 960 (60Hz)	1.0	2.9	11.9	0.9
SXGA (60Hz)	1.0	2.3	11.9	0.4
SXGA (75Hz)	1.1	1.8	9.5	0.1
SXGA (85Hz)	1.0	1.4	8.1	0.4
UXGA (60Hz)	1.2	1.9	9.9	0.4
W-XGA (60Hz)	1.7	2.5	16.0	0.8
WSXGA+(60Hz)	1.2	1.9	11.5	0.7
1280 x 800(60Hz)	1.6	2.4	15.3	0.8
W-UXGA(60Hz) Reduced Blanking	0.208	0.519	12.47	0.312

Computer/ Signal	Vertical signal timing (lines)			
	(a)	(b)	(c)	(d)
TEXT	3	42	400	1
VGA (60Hz)	2	33	480	10
VGA (72Hz)	3	28	480	9
VGA (75Hz)	3	16	480	1
VGA (85Hz)	3	25	480	1
SVGA (56Hz)	2	22	600	1
SVGA (60Hz)	4	23	600	1
SVGA (72Hz)	6	23	600	37
SVGA (75Hz)	3	21	600	1
SVGA (85Hz)	3	27	600	1
Mac 16" mode	3	39	624	1
XGA (60Hz)	6	29	768	3
XGA (70Hz)	6	29	768	3
XGA (75Hz)	3	28	768	1
XGA (85Hz)	3	36	768	1
1152 x 864 (75Hz)	3	32	864	1
1280 x 960 (60Hz)	3	36	960	1
SXGA(60Hz)	3	38	1024	1
SXGA (75Hz)	3	38	1024	1
SXGA (85Hz)	3	44	1024	1
UXGA (60Hz)	3	46	1200	1
W-XGA (60Hz)	3	23	768	1
WSXGA+(60Hz)	6	30	1050	3
1280 x 800(60Hz)	3	24	800	1
W-UXGA(60Hz) Reduced Blanking	6	26	1200	3

Connection to the ports



ⒶRGB 1, ⒷRGB OUT



D-sub 15pin mini shrink jack
• Video signal: RGB separate, Analog, 0.7Vp-p, 75Ω terminated (positive)
• H/V. sync. signal: TTL level (positive/negative)
• Composite sync. signal: TTL level

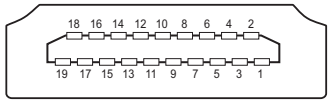
At RGB signal

Pin	Signal	Pin	Signal
1	Video Red	9	(No connection)
2	Video Green	10	Ground
3	Video Blue	11	(No connection)
4	(No connection)	12	Ⓐ: SDA (DDC data), Ⓑ : (No connection)
5	Ground	13	H. sync / Composite sync.
6	Ground Red	14	V. sync.
7	Ground Green	15	Ⓐ: SCL (DDC clock), Ⓑ : (No connection)
8	Ground Blue		

ⒸRGB 2(G/Y, B/C_B/P_B, R/C_R/P_R, H, V)

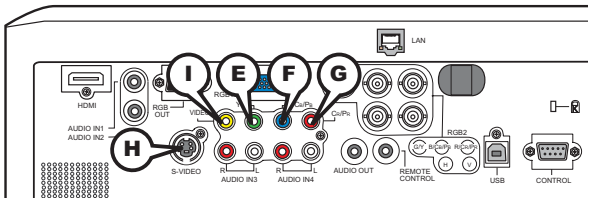
• BNC jack x 5
• Video : Analog 0.7Vp-p, 75Ω terminator
• H/V, sync, : TTL level (positive/negative)
• Composite sync, : TTL level

ⒹHDMI



• Type :Digital audio/video connector
• Audio signal : Linear PCM (Sampling rate; 32/44.1/48 kHz)

Pin	Signal	Pin	Signal	Pin	Signal
1	T.M.D.S. Data2 +	8	T.M.D.S. Data0 Shield	15	SCL
2	T.M.D.S. Data2 Shield	9	T.M.D.S. Data0 -	16	SDA
3	T.M.D.S. Data2 -	10	T.M.D.S. Clock +	17	DDC/CEC Ground
4	T.M.D.S. Data1 +	11	T.M.D.S. Clock Shield	18	+5V Power
5	T.M.D.S. Data1 Shield	12	T.M.D.S. Clock -	19	Hot Plug Detect
6	T.M.D.S. Data1 -	13	CEC		
7	T.M.D.S. Data0 +	14	Reserved(N.C. on device)		



COMPONENT VIDEO ⒺY, ⒻCB/PB, ⒼCR/PR

RCA jack x3

• System: 480i@60, 480p@60, 576i@50, 720p@50/60, 1080i@50/60,1080p@50/60

Port	Signal
Y	Component video Y, 1.0±0.1Vp-p, 75Ω terminator with composite sync
C_B/P_B	Component video C_B/P_B, 0.7±0.1Vp-p, 75Ω terminator
C_R/P_R	Component video C_R/P_R, 0.7±0.1Vp-p, 75Ω terminator

ⒽS-VIDEO

Mini DIN 4pin jack

• System: NTSC, PAL, SECAM, PAL-M, PAL-N, NTSC4.43, PAL(60Hz)

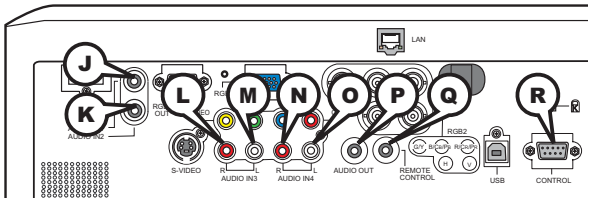
Pin	Signal
1	Color signal 0.286Vp-p (NTSC, burst), 75Ω terminator Color signal 0.300Vp-p (PAL/SECAM, burst) 75Ω terminator
2	Brightness signal, 1.0Vp-p, 75Ω terminator
3	Ground
4	Ground

ⒾVIDEO

RCA jack

• System: NTSC, PAL, SECAM, PAL-M, PAL-N, NTSC4.43, PAL(60Hz)

• 1.0±0.1Vp-p, 75Ω terminator



ⓙAUDIO IN 1, ⓚAUDIO IN 2

Ø3.5 stereo mini jack

• 500 mVrms 47kΩ terminator

AUDIO IN 3 ⓛR, ⓜL, AUDIO IN 4 ⓝR, ⓞL

RCA jack x2

• 500 mVrms 47kΩ terminator

ⓟAUDIO OUT

Ø3.5 stereo mini jack

• 500 mVrms 1kΩ output impedance

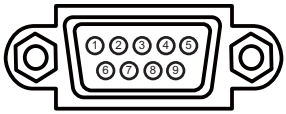
ⓠREMOTE CONTROL

Ø3.5 stereo mini jack

• To be connected with the remote control that came with the projector.

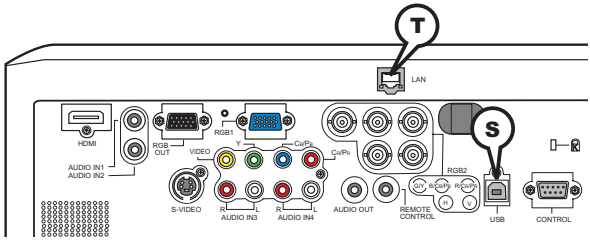
ⓡCONTROL

D-sub 9pin plug



• About the details of RS-232C communication, please refer to the following RS-232C Communication in this manual.

Pin	Signal	Pin	Signal	Pin	Signal
1	(No connection)	4	(No connection)	7	RTS
2	RD	5	Ground	8	CTS
3	TD	6	(No connection)	9	(No connection)



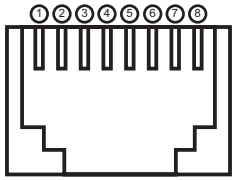
ⓈUSB

USB B type jack

Pin	Signal
1	+5V
2	- Data
3	+ Data
4	Ground

ⓉLAN

RJ-45 jack



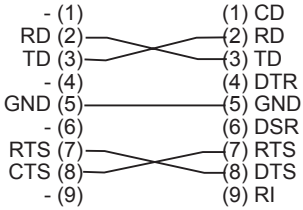
Pin	Signal	Pin	Signal	Pin	Signal
1	TX+	4	-	7	-
2	TX-	5	-	8	-
3	RX+	6	RX-		

RS-232C Communication

CONTROL port of the projector

RS-232C cable (Cross)

RS-232C port of the computer



Connecting the cable

1. Turn off the projector and the computer.
2. Connect the CONTROL port of the projector with a RS-232C port of the computer by a RS-232C cable (cross). Use the cable that fulfills the specification shown in the previous page.
3. Turn the computer on, and after the computer has started up turn the projector on.

Communications setting

19200bps, 8N1

1. Protocol

Consist of header (7 bytes) + command data (6 bytes).

2. Header

BE + EF + 03 + 06 + 00 + CRC_low + CRC_high
CRC_low : Lower byte of CRC flag for command data
CRC_high : Upper byte of CRC flag for command data

3. Command data

Command data chart

byte_0	byte_1	byte_2	byte_3	byte_4	byte_5
Action		Type		Setting code	
low	high	low	high	low	high

Action (byte_0 - 1)

Action	Classification	Content
1	SET	Change setting to desired value.
2	GET	Read projector internal setup value.
4	INCREMENT	Increment setup value by 1.
5	DECREMENT	Decrement setup value by 1.
6	EXECUTE	Run a command.

Requesting projector status (Get command)

(1) Send the request code Header + Command data ('02H'+'00H'+ type (2 bytes)+'00H' +'00H') from the computer to the projector.

(2) The projector returns the response code '1DH'+ data (2 bytes) to the computer.

Changing the projector settings (Set command)

(1) Send the setting code Header + Command data ('01H'+'00H'+ type (2 bytes) + setting code (2 bytes)) from the computer to the projector.

(2) The projector changes the setting based on the above setting code.

(3) The projector returns the response code '06H' to the computer.

Using the projector default settings (Reset Command)

(1) The computer sends the default setting code Header + Command data ('06H'+'00H' + type (2 bytes) +'00H'+'00H') to the projector.

(2) The projector changes the specified setting to the default value.

(3) The projector returns the response code '06H' to the computer.

Increasing the projector setting value (Increment command)

(1) The computer sends the increment code Header + Command data ('04H'+'00H'+ type (2 bytes) +'00H'+'00H') to the projector.

(2) The projector in creases the setting value on the above setting code.

(3) The projector returns the response code '06H' to the computer.

Decreasing the projector setting value (Decrement command)

(1) The computer sends the decrement code Header + Command data ('05H'+'00H'+ type (2 bytes) +'00H' + '00H') to the projector.

(2) The projector decreases the setting value on the above setting code.

(3) The projector returns the response code '06H' to the computer.

When the projector cannot understand the received command

When the projector cannot understand the received command, the error code '15H' is sent back to the computer.

Sometimes the projector cannot properly receive the command. In such a case, the command is not executed and the error code '15H' is sent back to the computer. If this error code is returned, send the same command again.

When the projector cannot execute the received command.

When the projector cannot execute the received command, the error code '1CH' + 'xxxxH' is sent back to the computer. When the data length is greater than indicated by the data length code, the projector ignore the excess data code.

Conversely when the data length is shorter than indicated by the data length code, an error code will be returned to the computer.

NOTE • Operation cannot be guaranteed when the projector receives an undefined command or data.

• Provide an interval of at least 40ms between the response code and any other code.

• The projector outputs test data when the power supply is switched ON, and when the lamp is lit. Ignore this data.

• Commands are not accepted during warm-up.

Command Control via the Network

Communication Port

The following two ports are assigned for the command control.

TCP #23
TCP #9715

Command Control Settings

Configure the following items form a web browser when command control is used.

Port Settings			
	Network Control Port1 (Port: 23)	Port open	Click the **[Enable]** check box to open **[Network Control Port1 (Port: 23)]** to use TCP #23. Default setting is “Enable”.
		Authentication	Click the **[Enable]** check box for the **[Authentication]** setting when authentication is required. Default setting is “Disable”.
	Network Control Port2 (Port: 9715)	Port open	Click the **[Enable]** check box to open **[Network Control Port2 (Port: 9715)]** to use TCP #9715. Default setting is “Enable”.
		Authentication	Click the **[Enable]** check box for the **[Authentication]** setting when authentication is required. Default setting is “Enable”.

When the authentication setting is enabled, the following settings are required.

Security Settings			
	Network Control	Authentication Password	Enter the desired authentication password. This setting will be the same for **[Network Control Port1 (Port: 23)]** and **[Network Control Port2 (Port: 9715)]**. Default setting is blank.
		Re-enter Authentication Password	

Command Format

[TCP #23]

1. Protocol

Consist of header (7 bytes) + command data (6 bytes)

2. Header

BE + EF + 03 + 06 + 00 + CRC_low + CRC_high
CRC_low: Lower byte of CRC flag for command data
CRC_high: Upper byte of CRC flag for command data

3. Command data

Command data chart

byte_0	byte_1	byte_2	byte_3	byte_4	byte_5
Action		Type		Setting code	
low	high	low	high	low	high

Action (byte_0 - 1)

Action	Classification	Content
1	Set	Change setting to desired value.
2	Get	Read projector internal setup value.
4	Increment	Increment setup value by 1.
5	Decrement	Decrement setup value by 1.
6	Execute	Run a command.

Requesting projector status (Get command)

(1) Send the following request code from the PC to the projector.
Header + Command data ('02H' + '00H' + type (2 bytes) + '00H' + '00H')
(2) The projector returns the response code *'1DH' + data (2 bytes)* to the PC.

Changing the projector settings (Set command)

(1) Send the following setting code from the PC to the projector.
Header + Command data ('01H' + '00H' + type (2 bytes) + setting code (2 bytes))
(2) The projector changes the setting based on the above setting code.
(3) The projector returns the response code *'06H'* to the PC.

Using the projector default settings (Reset Command)

(1) The PC sends the following default setting code to the projector.
Header + Command data ('06H' + '00H' + type (2 bytes) + '00H' + '00H')
(2) The projector changes the specified setting to the default value.
(3) The projector returns the response code *'06H'* to the PC.

Increasing the projector setting value (Increment command)

(1) The PC sends the following increment code to the projector.
Header + Command data ('04H' + '00H' + type (2 bytes) + '00H' + '00H')
(2) The projector increases the setting value on the above setting code.
(3) The projector returns the response code *'06H'* to the PC.

Decreasing the projector setting value (Decrement command)
(1) The PC sends the following decrement code to the projector.
Header + Command data ('05H' + '00H' + type (2 bytes) + '00H' + '00H')
(2) The projector decreases the setting value on the above setting code.
(3) The projector returns the response code *'06H'* to the PC.

When the projector cannot understand the received command
When the projector cannot understand the received command, the error code *'15H'* is sent back to the PC.
Sometimes the projector cannot properly receive the command. In such a case, the command is not executed and the error code *'15H'* is sent back to the PC. If this error code is returned, send the same command again.

When the projector cannot execute the received command.
When the projector cannot execute the received command, the error code *'1CH'* + *'xxxxH'* is sent back to the PC.
When the data length is greater than indicated by the data length code, the projector ignore the excess data code. Conversely when the data length is shorter than indicated by the data length code, an error code will be returned to the PC.

When authentication error occurred.
When authentication error occurred, the error code the *'1FH'* + *'0400H'* is sent back to the PC.

NOTE • Operation cannot be guaranteed when the projector receives an undefined command or data.
• Provide an interval of at least 40ms between the response code and any other code.
• Commands are not accepted during warm-up.

[TCP #9715]

1. Protocol
Consist of header (1 byte) + data length (1 byte) + command data (13 bytes) + check sum (1 bytes) + connection ID (1 byte).

2. Header
02, Fixed

3. Data Length
Network control commands byte length (0D, Fixed)

4. Command data
Network control commands that start with BE EF (13bytes).

5. Check Sum
This is the value to make zero on the addition of the lower 8 bits from the header to the checksum.

6. Connection ID
Random value from 0 to 255 (This value is attached to the reply data).

7. Reply Data

The connection ID (the data is same as the connection ID data on the sending data format) is attached to the Network control commands reply data.

ACK reply: *'06H'* + *'xxH'*
NAK reply: *'15H'* + *'xxH'*
Error reply: *'1CH'* + *'xxxxH'* + *'xxH'*
Data reply: *'1DH'* + *'xxxxH'* + *'xxH'*
Projector busy reply: *'1FH'* + *'xxxxH'* + *'xxH'*
Authentication error reply: *'1FH'* + *'0400H'* + *'xxH'*
(*'xxH'* : connection ID)

Automatic Connection Break

The TCP connection will be automatically disconnected after there is no communication for 30 seconds after being established.

Authentication

The projector does not accept commands without authentication success when authentication is enabled. The projector uses a challenge response type authentication with an MD5 (Message Digest 5) algorithm. When the projector is using a LAN, a random 8 bytes will be returned if authentication is enabled. Bind this received 8 bytes and the authentication password and digest this data with the MD5 algorithm and add this in front of the commands to send.

Following is a sample if the authentication password is set to “password” and the random 8 bytes are “a572f60c”.

1) Select the projector.
2) Receive the random 8 bytes “a572f60c” from the projector.
3) Bind the random 8 bytes “a572f60c” and the authentication password “password” and it becomes “a572f60cpassword”.
4) Digest this bind “a572f60cpassword” with MD5 algorithm.
   It will be “e3d97429adffa11bce1f7275813d4bde”.
5) Add this “e3d97429adffa11bce1f7275813d4bde” in front of the commands and send the data.
   Send “e3d97429adffa11bce1f7275813d4bde”+command.
6) When the sending data is correct, the command will be performed and the reply data will be returned. Otherwise, an authentication error will be returned.

NOTE • As for the transmission of the second or subsequent commands, the authentication data can be omitted when the same connection.

RS-232C Communication / Network command table

Names	Operation Type		Header			CRC	Command Data		
							Action	Type	Setting Code
Power	Set	TURN OFF	BE EF	03	06 00	2A D3	01 00	00 60	00 00
		TURN ON	BE EF	03	06 00	BA D2	01 00	00 60	01 00
		Get	BE EF	03	06 00	19 D3	02 00	00 60	00 00
			(Example Return) 00 00 (Off) 01 00 (On) 02 00 (Cool Down)						
Input Source	Set	HDMI	BE EF	03	06 00	0E D2	01 00	00 20	03 00
		RGB1	BE EF	03	06 00	FE D2	01 00	00 20	00 00
		RGB2	BE EF	03	06 00	3E D0	01 00	00 20	04 00
		VIDEO	BE EF	03	06 00	6E D3	01 00	00 20	01 00
		S-VIDEO	BE EF	03	06 00	9E D3	01 00	00 20	02 00
		COMPONENT	BE EF	03	06 00	AE D1	01 00	00 20	05 00
		Get	BE EF	03	06 00	CD D2	02 00	00 20	00 00
Error Status		Get	BE EF	03	06 00	D9 D8	02 00	20 60	00 00
			(Example Return) 00 00 (Normal) 01 00 (Cover error) 02 00 (Fan error) 03 00 (Lamp error) 04 00 (Temp error) 05 00 (Air flow error) 06 00 (Lamp time error) 07 00 (Cold error) 08 00 (Filter error)						
BRIGHTNESS		Get	BE EF	03	06 00	89 D2	02 00	03 20	00 00
		Increment	BE EF	03	06 00	EF D2	04 00	03 20	00 00
		Decrement	BE EF	03	06 00	3E D3	05 00	03 20	00 00
BRIGHTNESS Reset		Execute	BE EF	03	06 00	58 D3	06 00	00 70	00 00
CONTRAST		Get	BE EF	03	06 00	FD D3	02 00	04 20	00 00
		Increment	BE EF	03	06 00	9B D3	04 00	04 20	00 00
		Decrement	BE EF	03	06 00	4A D2	05 00	04 20	00 00
CONTRAST Reset		Execute	BE EF	03	06 00	A4 D2	06 00	01 70	00 00
PICTURE MODE	Set	NORMAL	BE EF	03	06 00	23 F6	01 00	BA 30	00 00
		CINEMA	BE EF	03	06 00	B3 F7	01 00	BA 30	01 00
		DYNAMIC	BE EF	03	06 00	E3 F4	01 00	BA 30	04 00
		BOARD (BLACK)	BE EF	03	06 00	E3 EF	01 00	BA 30	20 00
		BOARD (GREEN)	BE EF	03	06 00	73 EE	01 00	BA 30	21 00
		WHITE BOARD	BE EF	03	06 00	83 EE	01 00	BA 30	22 00
		DAY TIME	BE EF	03	06 00	E3 C7	01 00	BA 30	40 00
		Get	BE EF	03	06 00	10 F6	02 00	BA 30	00 00
			(Example Return) 00 00 (Normal) 01 00 (CINEMA) 04 00 (DYNAMIC) 10 00 (CUSTOM) 20 00 (BOARD(BLACK)) 21 00 (BOARD(GREEN)) 22 00 (WHITEBOARD) 40 00 (DAY TIME)						

Names	Operation Type		Header			CRC	Command Data		
							Action	Type	Setting Code
GAMMA	Set	#1 DEFAULT	BE EF	03	06 00	07 E9	01 00	A1 30	20 00
		#2 DEFAULT	BE EF	03	06 00	97 E8	01 00	A1 30	21 00
		#3 DEFAULT	BE EF	03	06 00	67 E8	01 00	A1 30	22 00
		#4 DEFAULT	BE EF	03	06 00	F7 E9	01 00	A1 30	23 00
		#5 DEFAULT	BE EF	03	06 00	C7 EB	01 00	A1 30	24 00
		#6 DEFAULT	BE EF	03	06 00	57 EA	01 00	A1 30	25 00
		#1 CUSTOM	BE EF	03	06 00	07 FD	01 00	A1 30	10 00
		#2 CUSTOM	BE EF	03	06 00	97 FC	01 00	A1 30	11 00
		#3 CUSTOM	BE EF	03	06 00	67 FC	01 00	A1 30	12 00
		#4 CUSTOM	BE EF	03	06 00	F7 FD	01 00	A1 30	13 00
		#5 CUSTOM	BE EF	03	06 00	C7 FF	01 00	A1 30	14 00
		#6 CUSTOM	BE EF	03	06 00	57 FE	01 00	A1 30	15 00
	Get		BE EF	03	06 00	F4 F0	02 00	A1 30	00 00
User Gamma Pattern	Set	Off	BE EF	03	06 00	FB FA	01 00	80 30	00 00
		9step Gray Scale	BE EF	03	06 00	6B FB	01 00	80 30	01 00
		15step Gray Scale	BE EF	03	06 00	9B FB	01 00	80 30	02 00
		Ramp	BE EF	03	06 00	0B FA	01 00	80 30	03 00
	Get		BE EF	03	06 00	C8 FA	02 00	80 30	00 00
User Gamma Point 1	Get		BE EF	03	06 00	08 FE	02 00	90 30	00 00
	Increment		BE EF	03	06 00	6E FE	04 00	90 30	00 00
	Decrement		BE EF	03	06 00	BF FF	05 00	90 30	00 00
User Gamma Point 2	Get		BE EF	03	06 00	F4 FF	02 00	91 30	00 00
	Increment		BE EF	03	06 00	92 FF	04 00	91 30	00 00
	Decrement		BE EF	03	06 00	43 FE	05 00	91 30	00 00
User Gamma Point 3	Get		BE EF	03	06 00	B0 FF	02 00	92 30	00 00
	Increment		BE EF	03	06 00	D6 FF	04 00	92 30	00 00
	Decrement		BE EF	03	06 00	07 FE	05 00	92 30	00 00
User Gamma Point 4	Get		BE EF	03	06 00	4C FE	02 00	93 30	00 00
	Increment		BE EF	03	06 00	2A FE	04 00	93 30	00 00
	Decrement		BE EF	03	06 00	FB FF	05 00	93 30	00 00
User Gamma Point 5	Get		BE EF	03	06 00	38 FF	02 00	94 30	00 00
	Increment		BE EF	03	06 00	5E FF	04 00	94 30	00 00
	Decrement		BE EF	03	06 00	8F FE	05 00	94 30	00 00
User Gamma Point 6	Get		BE EF	03	06 00	C4 FE	02 00	95 30	00 00
	Increment		BE EF	03	06 00	A2 FE	04 00	95 30	00 00
	Decrement		BE EF	03	06 00	73 FF	05 00	95 30	00 00
User Gamma Point 7	Get		BE EF	03	06 00	80 FE	02 00	96 30	00 00
	Increment		BE EF	03	06 00	E6 FE	04 00	96 30	00 00
	Decrement		BE EF	03	06 00	37 FF	05 00	96 30	00 00
User Gamma Point 8	Get		BE EF	03	06 00	7C FF	02 00	97 30	00 00
	Increment		BE EF	03	06 00	1A FF	04 00	97 30	00 00
	Decrement		BE EF	03	06 00	CB FE	05 00	97 30	00 00

Names	Operation Type		Header			CRC	Command Data		
							Action	Type	Setting Code
COLOR TEMP	Set	#1 HIGH	BE EF	03	06 00	0B F5	01 00	B0 30	03 00
		#2 MID	BE EF	03	06 00	9B F4	01 00	B0 30	02 00
		#3 LOW	BE EF	03	06 00	6B F4	01 00	B0 30	01 00
		#4 Hi-BRIGHT-1	BE EF	03	06 00	3B F2	01 00	B0 30	08 00
		#5 Hi-BRIGHT-2	BE EF	03	06 00	AB F3	01 00	B0 30	09 00
		#6 Hi-BRIGHT-3	BE EF	03	06 00	5B F3	01 00	B0 30	0A 00
		#1 CUSTOM (HIGH)	BE EF	03	06 00	CB F8	01 00	B0 30	13 00
		#2 CUSTOM (MID)	BE EF	03	06 00	5B F9	01 00	B0 30	12 00
		#3 CUSTOM (LOW)	BE EF	03	06 00	AB F9	01 00	B0 30	11 00
		#4 CUSTOM (Hi-BRIGHT-1)	BE EF	03	06 00	FB FF	01 00	B0 30	18 00
		#5 CUSTOM (Hi-BRIGHT-2)	BE EF	03	06 00	6B FE	01 00	B0 30	19 00
		#6 CUSTOM (Hi-BRIGHT-3)	BE EF	03	06 00	9B FE	01 00	B0 30	1A 00
	Get		BE EF	03	06 00	C8 F5	02 00	B0 30	00 00
COLOR TEMP GAIN R	Get		BE EF	03	06 00	34 F4	02 00	B1 30	00 00
	Increment		BE EF	03	06 00	52 F4	04 00	B1 30	00 00
	Decrement		BE EF	03	06 00	83 F5	05 00	B1 30	00 00
COLOR TEMP GAIN G	Get		BE EF	03	06 00	70 F4	02 00	B2 30	00 00
	Increment		BE EF	03	06 00	16 F4	04 00	B2 30	00 00
	Decrement		BE EF	03	06 00	C7 F5	05 00	B2 30	00 00
COLOR TEMP GAIN B	Get		BE EF	03	06 00	8C F5	02 00	B3 30	00 00
	Increment		BE EF	03	06 00	EA F5	04 00	B3 30	00 00
	Decrement		BE EF	03	06 00	3B F4	05 00	B3 30	00 00
COLOR TEMP OFFSET R	Get		BE EF	03	06 00	04 F5	02 00	B5 30	00 00
	Increment		BE EF	03	06 00	62 F5	04 00	B5 30	00 00
	Decrement		BE EF	03	06 00	B3 F4	05 00	B5 30	00 00
COLOR TEMP OFFSET G	Get		BE EF	03	06 00	40 F5	02 00	B6 30	00 00
	Increment		BE EF	03	06 00	26 F5	04 00	B6 30	00 00
	Decrement		BE EF	03	06 00	F7 F4	05 00	B6 30	00 00
COLOR TEMP OFFSET B	Get		BE EF	03	06 00	BC F4	02 00	B7 30	00 00
	Increment		BE EF	03	06 00	DA F4	04 00	B7 30	00 00
	Decrement		BE EF	03	06 00	0B F5	05 00	B7 30	00 00
COLOR	Get		BE EF	03	06 00	B5 72	02 00	02 22	00 00
	Increment		BE EF	03	06 00	D3 72	04 00	02 22	00 00
	Decrement		BE EF	03	06 00	02 73	05 00	02 22	00 00
COLOR Reset	Execute		BE EF	03	06 00	80 D0	06 00	0A 70	00 00
TINT	Get		BE EF	03	06 00	49 73	02 00	03 22	00 00
	Increment		BE EF	03	06 00	2F 73	04 00	03 22	00 00
	Decrement		BE EF	03	06 00	FE 72	05 00	03 22	00 00
TINT Reset	Execute		BE EF	03	06 00	7C D1	06 00	0B 70	00 00
SHARPNESS	Get		BE EF	03	06 00	F1 72	02 00	01 22	00 00
	Increment		BE EF	03	06 00	97 72	04 00	01 22	00 00
	Decrement		BE EF	03	06 00	46 73	05 00	01 22	00 00
SHARPNESS Reset	Execute		BE EF	03	06 00	C4 D0	06 00	09 70	00 00

RS-232C Communication / Network command table

Names	Operation Type		Header			CRC	Command Data		
							Action	Type	Setting Code
MY MEMORY Load	Set	1	BE EF	03	06 00	0E D7	01 00	14 20	00 00
		2	BE EF	03	06 00	9E D6	01 00	14 20	01 00
		3	BE EF	03	06 00	6E D6	01 00	14 20	02 00
		4	BE EF	03	06 00	FE D7	01 00	14 20	03 00
MY MEMORY Save	Set	1	BE EF	03	06 00	F2 D6	01 00	15 20	00 00
		2	BE EF	03	06 00	62 D7	01 00	15 20	01 00
		3	BE EF	03	06 00	92 D7	01 00	15 20	02 00
		4	BE EF	03	06 00	02 D6	01 00	15 20	03 00
PROGRESSIVE	Set	TURN OFF	BE EF	03	06 00	4A 72	01 00	07 22	00 00
		TV	BE EF	03	06 00	DA 73	01 00	07 22	01 00
		FILM	BE EF	03	06 00	2A 73	01 00	07 22	02 00
	Get		BE EF	03	06 00	79 72	02 00	07 22	00 00
3D-YCS	Set	TURN OFF	BE EF	03	06 00	E6 70	01 00	0A 22	00 00
		MOVIE	BE EF	03	06 00	76 71	01 00	0A 22	01 00
		STILL IMAGE	BE EF	03	06 00	86 71	01 00	0A 22	02 00
	Get		BE EF	03	06 00	D5 70	02 00	0A 22	00 00
VIDEO NR	Set	LOW	BE EF	03	06 00	26 72	01 00	06 22	01 00
		MIDDLE	BE EF	03	06 00	D6 72	01 00	06 22	02 00
		HIGH	BE EF	03	06 00	46 73	01 00	06 22	03 00
	Get		BE EF	03	06 00	85 73	02 00	06 22	00 00
ASPECT	Set	4:3	BE EF	03	06 00	9E D0	01 00	08 20	00 00
		16:9	BE EF	03	06 00	0E D1	01 00	08 20	01 00
		REAL	BE EF	03	06 00	5E D7	01 00	08 20	08 00
		14:9	BE EF	03	06 00	CE D6	01 00	08 20	09 00
		16:10	BE EF	03	06 00	3E D6	01 00	08 20	0A 00
		NORMAL	BE EF	03	06 00	5E DD	01 00	08 20	10 00
	Get		BE EF	03	06 00	AD D0	02 00	08 20	00 00
OVER SCAN	Get		BE EF	03	06 00	91 70	02 00	09 22	00 00
	Increment		BE EF	03	06 00	F7 70	04 00	09 22	00 00
	Decrement		BE EF	03	06 00	26 71	05 00	09 22	00 00
OVER SCAN Reset	Execute		BE EF	03	06 00	EC D9	06 00	27 70	00 00
V POSITION	Get		BE EF	03	06 00	0D 83	02 00	00 21	00 00
	Increment		BE EF	03	06 00	6B 83	04 00	00 21	00 00
	Decrement		BE EF	03	06 00	BA 82	05 00	00 21	00 00
V POSITION Reset	Execute		BE EF	03	06 00	E0 D2	06 00	02 70	00 00
H POSITION	Get		BE EF	03	06 00	F1 82	02 00	01 21	00 00
	Increment		BE EF	03	06 00	97 82	04 00	01 21	00 00
	Decrement		BE EF	03	06 00	46 83	05 00	01 21	00 00
H POSITION Reset	Execute		BE EF	03	06 00	1C D3	06 00	03 70	00 00
H PHASE	Get		BE EF	03	06 00	49 83	02 00	03 21	00 00
	Increment		BE EF	03	06 00	2F 83	04 00	03 21	00 00
	Decrement		BE EF	03	06 00	FE 82	05 00	03 21	00 00
H SIZE	Get		BE EF	03	06 00	B5 82	02 00	02 21	00 00
	Increment		BE EF	03	06 00	D3 82	04 00	02 21	00 00
	Decrement		BE EF	03	06 00	02 83	05 00	02 21	00 00
H SIZE Reset	Execute		BE EF	03	06 00	68 D2	06 00	04 70	00 00
AUTO ADJUST	Execute		BE EF	03	06 00	91 D0	06 00	0A 20	00 00

Names	Operation Type		Header			CRC	Command Data		
							Action	Type	Setting Code
COLOR SPACE	Set	AUTO	BE EF	03	06 00	0E 72	01 00	04 22	00 00
		RGB	BE EF	03	06 00	9E 73	01 00	04 22	01 00
		SMPTE240	BE EF	03	06 00	6E 73	01 00	04 22	02 00
		REC709	BE EF	03	06 00	FE 72	01 00	04 22	03 00
		REC601	BE EF	03	06 00	CE 70	01 00	04 22	04 00
	Get		BE EF	03	06 00	3D 72	02 00	04 22	00 00
COMPONENT	Set	COMPONENT	BE EF	03	06 00	4A D7	01 00	17 20	00 00
		SCART RGB	BE EF	03	06 00	DA D6	01 00	17 20	01 00
	Get		BE EF	03	06 00	79 D7	02 00	17 20	00 00
C-VIDEO FORMAT	Set	AUTO	BE EF	03	06 00	A2 70	01 00	11 22	0A 00
		NTSC	BE EF	03	06 00	C2 74	01 00	11 22	04 00
		PAL	BE EF	03	06 00	52 75	01 00	11 22	05 00
		SECAM	BE EF	03	06 00	52 70	01 00	11 22	09 00
		NTSC4.43	BE EF	03	06 00	62 77	01 00	11 22	02 00
		M-PAL	BE EF	03	06 00	C2 71	01 00	11 22	08 00
		N-PAL	BE EF	03	06 00	32 74	01 00	11 22	07 00
	Get		BE EF	03	06 00	31 76	02 00	11 22	00 00
S-VIDEO FORMAT	Set	AUTO	BE EF	03	06 00	E6 70	01 00	12 22	0A 00
		NTSC	BE EF	03	06 00	86 74	01 00	12 22	04 00
		PAL	BE EF	03	06 00	16 75	01 00	12 22	05 00
		SECAM	BE EF	03	06 00	16 70	01 00	12 22	09 00
		NTSC4.43	BE EF	03	06 00	26 77	01 00	12 22	02 00
		M-PAL	BE EF	03	06 00	86 71	01 00	12 22	08 00
		N-PAL	BE EF	03	06 00	76 74	01 00	12 22	07 00
	Get		BE EF	03	06 00	75 76	02 00	12 22	00 00
HDMI	Set	AUTO	BE EF	03	06 00	86 D8	01 00	22 20	00 00
		NORMAL	BE EF	03	06 00	16 D9	01 00	22 20	01 00
		ENHANCED	BE EF	03	06 00	E6 D9	01 00	22 20	02 00
	Get		BE EF	03	06 00	B5 D8	02 00	22 20	00 00
RGB IN1	Set	SYNC ON G OFF	BE EF	03	06 00	5E D7	01 00	10 20	02 00
		AUTO	BE EF	03	06 00	CE D6	01 00	10 20	03 00
	Get		BE EF	03	06 00	0D D6	02 00	10 20	00 00
RGB IN2	Set	SYNC ON G OFF	BE EF	03	06 00	A2 D6	01 00	11 20	02 00
		AUTO	BE EF	03	06 00	32 D7	01 00	11 20	03 00
	Get		BE EF	03	06 00	F1 D7	02 00	11 20	00 00
FRAME LOCK - RGB1	Set	TURN OFF	BE EF	03	06 00	3B C2	01 00	50 30	00 00
		TURN ON	BE EF	03	06 00	AB C3	01 00	50 30	01 00
	Get		BE EF	03	06 00	08 C2	02 00	50 30	00 00
FRAME LOCK - RGB2	Set	TURN OFF	BE EF	03	06 00	0B C3	01 00	54 30	00 00
		TURN ON	BE EF	03	06 00	9B C2	01 00	54 30	01 00
	Get		BE EF	03	06 00	38 C3	02 00	54 30	00 00
FRAME LOCK - HDMI	Set	TURN OFF	BE EF	03	06 00	7F C2	01 00	53 30	00 00
		TURN ON	BE EF	03	06 00	EF C3	01 00	53 30	01 00
	Get		BE EF	03	06 00	4C C2	02 00	53 30	00 00
KEYSTONE V	Get		BE EF	03	06 00	B9 D3	02 00	07 20	00 00
	Increment		BE EF	03	06 00	DF D3	04 00	07 20	00 00
	Decrement		BE EF	03	06 00	0E D2	05 00	07 20	00 00
KEYSTONE V Reset	Execute		BE EF	03	06 00	08 D0	06 00	0C 70	00 00

Names	Operation Type		Header			CRC	Command Data		
							Action	Type	Setting Code
AUTO KEYSTONE V EXECUTE	Execute		BE EF	03	06 00	E5 D1	06 00	0D 20	00 00
AUTO KEYSTONE V	Set	TURN OFF	BE EF	03	06 00	EA D1	01 00	0F 20	00 00
		TURN ON	BE EF	03	06 00	7A D0	01 00	0F 20	01 00
	Get		BE EF	03	06 00	D9 D1	02 00	0F 20	00 00
KEYSTONE H	Get		BE EF	03	06 00	E9 D0	02 00	0B 20	00 00
	Increment		BE EF	03	06 00	8F D0	04 00	0B 20	00 00
	Decrement		BE EF	03	06 00	5E D1	05 00	0B 20	00 00
KEYSTONE H Reset	Execute		BE EF	03	06 00	98 D8	06 00	20 70	00 00
PERFECT FIT	Set	Disable	BE EF	03	06 00	FE 88	01 00	20 21	00 00
		Enable	BE EF	03	06 00	6E 89	01 00	20 21	01 00
	Get		BE EF	03	06 00	CD 88	02 00	20 21	00 00
PERFECT FIT Left Top corner -H	Get		BE EF	03	06 00	31 89	02 00	21 21	00 00
	Increment		BE EF	03	06 00	57 89	04 00	21 21	00 00
	Decrement		BE EF	03	06 00	86 88	05 00	21 21	00 00
PERFECT FIT Left Top corner -V	Get		BE EF	03	06 00	75 89	02 00	22 21	00 00
	Increment		BE EF	03	06 00	13 89	04 00	22 21	00 00
	Decrement		BE EF	03	06 00	C2 88	05 00	22 21	00 00
PERFECT FIT Right Top corner -H	Get		BE EF	03	06 00	89 88	02 00	23 21	00 00
	Increment		BE EF	03	06 00	EF 88	04 00	23 21	00 00
	Decrement		BE EF	03	06 00	3E 89	05 00	23 21	00 00
PERFECT FIT Right Top corner -V	Get		BE EF	03	06 00	FD 89	02 00	24 21	00 00
	Increment		BE EF	03	06 00	9B 89	04 00	24 21	00 00
	Decrement		BE EF	03	06 00	4A 88	05 00	24 21	00 00
PERFECT FIT Left Bottom corner -H	Get		BE EF	03	06 00	01 88	02 00	25 21	00 00
	Increment		BE EF	03	06 00	67 88	04 00	25 21	00 00
	Decrement		BE EF	03	06 00	B6 89	05 00	25 21	00 00
PERFECT FIT Left Bottom corner -V	Get		BE EF	03	06 00	45 88	02 00	26 21	00 00
	Increment		BE EF	03	06 00	23 88	04 00	26 21	00 00
	Decrement		BE EF	03	06 00	F2 89	05 00	26 21	00 00
PERFECT FIT Right Bottom corner -H	Get		BE EF	03	06 00	B9 89	02 00	27 21	00 00
	Increment		BE EF	03	06 00	DF 89	04 00	27 21	00 00
	Decrement		BE EF	03	06 00	0E 88	05 00	27 21	00 00
PERFECT FIT Right Bottom corner -V	Get		BE EF	03	06 00	AD 8A	02 00	28 21	00 00
	Increment		BE EF	03	06 00	CB 8A	04 00	28 21	00 00
	Decrement		BE EF	03	06 00	1A 8B	05 00	28 21	00 00
PERFECT FIT all corners Reset	Execute		BE EF	03	06 00	D5 8A	06 00	29 21	00 00

Names	Operation Type		Header			CRC	Command Data		
							Action	Type	Setting Code
ACTIVE IRIS	Set	TURN OFF	BE EF	03	06 00	0B 22	01 00	04 33	00 00
		THEATER	BE EF	03	06 00	CB 2F	01 00	04 33	10 00
		PRESENTATION	BE EF	03	06 00	5B 2E	01 00	04 33	11 00
	Get		BE EF	03	06 00	38 22	02 00	04 33	00 00
WHISPER	Set	NORMAL	BE EF	03	06 00	3B 23	01 00	00 33	00 00
		WHISPER	BE EF	03	06 00	AB 22	01 00	00 33	01 00
	Get		BE EF	03	06 00	08 23	02 00	00 33	00 00
MIRROR	Set	NORMAL	BE EF	03	06 00	C7 D2	01 00	01 30	00 00
		H:INVERT	BE EF	03	06 00	57 D3	01 00	01 30	01 00
		V:INVERT	BE EF	03	06 00	A7 D3	01 00	01 30	02 00
		H&V:INVERT	BE EF	03	06 00	37 D2	01 00	01 30	03 00
	Get		BE EF	03	06 00	F4 D2	02 00	01 30	00 00
MONITOR OUT - RGB1	Set	RGB1	BE EF	03	06 00	3E F4	01 00	B0 20	00 00
		RGB2	BE EF	03	06 00	FE F6	01 00	B0 20	04 00
		TURN OFF	BE EF	03	06 00	CE B5	01 00	B0 20	FF 00
	Get		BE EF	03	06 00	0D F4	02 00	B0 20	00 00
MONITOR OUT - RGB2	Set	RGB1	BE EF	03	06 00	0E F5	01 00	B4 20	00 00
		RGB2	BE EF	03	06 00	CE F7	01 00	B4 20	04 00
		TURN OFF	BE EF	03	06 00	FE B4	01 00	B4 20	FF 00
	Get		BE EF	03	06 00	3D F5	02 00	B4 20	00 00
MONITOR OUT - HDMI	Set	RGB1	BE EF	03	06 00	7A F4	01 00	B3 20	00 00
		RGB2	BE EF	03	06 00	BA F6	01 00	B3 20	04 00
		TURN OFF	BE EF	03	06 00	8A B5	01 00	B3 20	FF 00
	Get		BE EF	03	06 00	49 F4	02 00	B3 20	00 00
MONITOR OUT - COMPONENT	Set	RGB1	BE EF	03	06 00	F2 F4	01 00	B5 20	00 00
		RGB2	BE EF	03	06 00	32 F6	01 00	B5 20	04 00
		TURN OFF	BE EF	03	06 00	02 B5	01 00	B5 20	FF 00
	Get		BE EF	03	06 00	C1 F4	02 00	B5 20	00 00
MONITOR OUT - S-VIDEO	Set	RGB1	BE EF	03	06 00	86 F5	01 00	B2 20	00 00
		RGB2	BE EF	03	06 00	46 F7	01 00	B2 20	04 00
		TURN OFF	BE EF	03	06 00	76 B4	01 00	B2 20	FF 00
	Get		BE EF	03	06 00	B5 F5	02 00	B2 20	00 00
MONITOR OUT - VIDEO	Set	RGB1	BE EF	03	06 00	C2 F5	01 00	B1 20	00 00
		RGB2	BE EF	03	06 00	02 F7	01 00	B1 20	04 00
		TURN OFF	BE EF	03	06 00	32 B4	01 00	B1 20	FF 00
	Get		BE EF	03	06 00	F1 F5	02 00	B1 20	00 00

RS-232C Communication / Network command table

Names	Operation Type		Header			CRC	Command Data		
							Action	Type	Setting Code
MONITOR OUT - STANDBY	Set	RGB1	BE EF	03	06 00	2A F7	01 00	BF 20	00 00
		RGB2	BE EF	03	06 00	EA F5	01 00	BF 20	04 00
		TURN OFF	BE EF	03	06 00	DA B6	01 00	BF 20	FF 00
	Get		BE EF	03	06 00	19 F7	02 00	BF 20	00 00
VOLUME - RGB1	Get		BE EF	03	06 00	CD CC	02 00	60 20	00 00
	Increment		BE EF	03	06 00	AB CC	04 00	60 20	00 00
	Decrement		BE EF	03	06 00	7A CD	05 00	60 20	00 00
VOLUME - RGB2	Get		BE EF	03	06 00	FD CD	02 00	64 20	00 00
	Increment		BE EF	03	06 00	9B CD	04 00	64 20	00 00
	Decrement		BE EF	03	06 00	4A CC	05 00	64 20	00 00
VOLUME - HDMI	Get		BE EF	03	06 00	89 CC	02 00	63 20	00 00
	Increment		BE EF	03	06 00	EF CC	04 00	63 20	00 00
	Decrement		BE EF	03	06 00	3E CD	05 00	63 20	00 00
VOLUME - COMPONENT	Get		BE EF	03	06 00	01 CC	02 00	65 20	00 00
	Increment		BE EF	03	06 00	67 CC	04 00	65 20	00 00
	Decrement		BE EF	03	06 00	B6 CD	05 00	65 20	00 00
VOLUME - S-VIDEO	Get		BE EF	03	06 00	75 CD	02 00	62 20	00 00
	Increment		BE EF	03	06 00	13 CD	04 00	62 20	00 00
	Decrement		BE EF	03	06 00	C2 CC	05 00	62 20	00 00
VOLUME - VIDEO	Get		BE EF	03	06 00	31 CD	02 00	61 20	00 00
	Increment		BE EF	03	06 00	57 CD	04 00	61 20	00 00
	Decrement		BE EF	03	06 00	86 CC	05 00	61 20	00 00
VOLUME - AUDIO OUT STANDBY	Get		BE EF	03	06 00	D9 CF	02 00	6F 20	00 00
	Increment		BE EF	03	06 00	BF CF	04 00	6F 20	00 00
	Decrement		BE EF	03	06 00	6E CE	05 00	6F 20	00 00
TREBLE - RGB1	Get		BE EF	03	06 00	0D C8	02 00	70 20	00 00
	Increment		BE EF	03	06 00	6B C8	04 00	70 20	00 00
	Decrement		BE EF	03	06 00	BA C9	05 00	70 20	00 00
TREBLE -RGB2	Get		BE EF	03	06 00	3D C9	02 00	74 20	00 00
	Increment		BE EF	03	06 00	5B C9	04 00	74 20	00 00
	Decrement		BE EF	03	06 00	8A C8	05 00	74 20	00 00
TREBLE - HDMI	Get		BE EF	03	06 00	49 C8	02 00	73 20	00 00
	Increment		BE EF	03	06 00	2F C8	04 00	73 20	00 00
	Decrement		BE EF	03	06 00	FE C9	05 00	73 20	00 00
TREBLE - COMPONENT	Get		BE EF	03	06 00	C1 C8	02 00	75 20	00 00
	Increment		BE EF	03	06 00	A7 C8	04 00	75 20	00 00
	Decrement		BE EF	03	06 00	76 C9	05 00	75 20	00 00
TREBLE - S-VIDEO	Get		BE EF	03	06 00	B5 C9	02 00	72 20	00 00
	Increment		BE EF	03	06 00	D3 C9	04 00	72 20	00 00
	Decrement		BE EF	03	06 00	02 C8	05 00	72 20	00 00
TREBLE - VIDEO	Get		BE EF	03	06 00	F1 C9	02 00	71 20	00 00
	Increment		BE EF	03	06 00	97 C9	04 00	71 20	00 00
	Decrement		BE EF	03	06 00	46 C8	05 00	71 20	00 00
TREBLE - AUDIO OUT STANDBY	Get		BE EF	03	06 00	19 CB	02 00	7F 20	00 00
	Increment		BE EF	03	06 00	7F CB	04 00	7F 20	00 00
	Decrement		BE EF	03	06 00	AE CA	05 00	7F 20	00 00

Names	Operation Type		Header			CRC	Command Data		
							Action	Type	Setting Code
BASS - RGB1	Get		BE EF	03	06 00	0D FB	02 00	80 20	00 00
	Increment		BE EF	03	06 00	6B FB	04 00	80 20	00 00
	Decrement		BE EF	03	06 00	BA FA	05 00	80 20	00 00
BASS - RGB2	Get		BE EF	03	06 00	3D FA	02 00	84 20	00 00
	Increment		BE EF	03	06 00	5B FA	04 00	84 20	00 00
	Decrement		BE EF	03	06 00	8A FB	05 00	84 20	00 00
BASS - HDMI	Get		BE EF	03	06 00	49 FB	02 00	83 20	00 00
	Increment		BE EF	03	06 00	2F FB	04 00	83 20	00 00
	Decrement		BE EF	03	06 00	FE FA	05 00	83 20	00 00
BASS - COMPONENT	Get		BE EF	03	06 00	C1 FB	02 00	85 20	00 00
	Increment		BE EF	03	06 00	A7 FB	04 00	85 20	00 00
	Decrement		BE EF	03	06 00	76 FA	05 00	85 20	00 00
BASS - S-VIDEO	Get		BE EF	03	06 00	B5 FA	02 00	82 20	00 00
	Increment		BE EF	03	06 00	D3 FA	04 00	82 20	00 00
	Decrement		BE EF	03	06 00	02 FB	05 00	82 20	00 00
BASS - VIDEO	Get		BE EF	03	06 00	F1 FA	02 00	81 20	00 00
	Increment		BE EF	03	06 00	97 FA	04 00	81 20	00 00
	Decrement		BE EF	03	06 00	46 FB	05 00	81 20	00 00
BASS - AUDIO OUT STANDBY	Get		BE EF	03	06 00	19 F8	02 00	8F 20	00 00
	Increment		BE EF	03	06 00	7F F8	04 00	8F 20	00 00
	Decrement		BE EF	03	06 00	AE F9	05 00	8F 20	00 00
MUTE	Set	TURN OFF	BE EF	03	06 00	46 D3	01 00	02 20	00 00
		TURN ON	BE EF	03	06 00	D6 D2	01 00	02 20	01 00
	Get		BE EF	03	06 00	75 D3	02 00	02 20	00 00
SPEAKER	Set	TURN OFF	BE EF	03	06 00	6E D5	01 00	1C 20	00 00
		TURN ON	BE EF	03	06 00	FE D4	01 00	1C 20	01 00
	Get		BE EF	03	06 00	5D D5	02 00	1C 20	00 00
AUDIO - RGB1	Set	TURN OFF	BE EF	03	06 00	FE DD	01 00	30 20	00 00
		AUDIO1	BE EF	03	06 00	6E DC	01 00	30 20	01 00
		AUDIO2	BE EF	03	06 00	9E DC	01 00	30 20	02 00
		AUDIO3	BE EF	03	06 00	0E DD	01 00	30 20	03 00
		AUDIO4	BE EF	03	06 00	3E DF	01 00	30 20	04 00
	Get		BE EF	03	06 00	CD DD	02 00	30 20	00 00
AUDIO - RGB2	Set	TURN OFF	BE EF	03	06 00	CE DC	01 00	34 20	00 00
		AUDIO1	BE EF	03	06 00	5E DD	01 00	34 20	01 00
		AUDIO2	BE EF	03	06 00	AE DD	01 00	34 20	02 00
		AUDIO3	BE EF	03	06 00	3E DC	01 00	34 20	03 00
		AUDIO4	BE EF	03	06 00	0E DE	01 00	34 20	04 00
	Get		BE EF	03	06 00	FD DC	02 00	34 20	00 00
AUDIO - HDMI	Set	TURN OFF	BE EF	03	06 00	BA DD	01 00	33 20	00 00
		AUDIO1	BE EF	03	06 00	2A DC	01 00	33 20	01 00
		AUDIO2	BE EF	03	06 00	DA DC	01 00	33 20	02 00
		AUDIO3	BE EF	03	06 00	4A DD	01 00	33 20	03 00
		AUDIO4	BE EF	03	06 00	7A DF	01 00	33 20	04 00
		AUDIO_HDMI	BE EF	03	06 00	7A C4	01 00	33 20	20 00
	Get		BE EF	03	06 00	89 DD	02 00	33 20	00 00

RS-232C Communication / Network command table

Names	Operation Type		Header			CRC	Command Data		
							Action	Type	Setting Code
AUDIO - COMPONENT	Set	TURN OFF	BE EF	03	06 00	32 DD	01 00	35 20	00 00
		AUDIO1	BE EF	03	06 00	A2 DC	01 00	35 20	01 00
		AUDIO2	BE EF	03	06 00	52 DC	01 00	35 20	02 00
		AUDIO3	BE EF	03	06 00	C2 DD	01 00	35 20	03 00
		AUDIO4	BE EF	03	06 00	F2 DF	01 00	35 20	04 00
	Get		BE EF	03	06 00	01 DD	02 00	35 20	00 00
AUDIO - S-VIDEO	Set	TURN OFF	BE EF	03	06 00	46 DC	01 00	32 20	00 00
		AUDIO1	BE EF	03	06 00	D6 DD	01 00	32 20	01 00
		AUDIO2	BE EF	03	06 00	26 DD	01 00	32 20	02 00
		AUDIO3	BE EF	03	06 00	B6 DC	01 00	32 20	03 00
		AUDIO4	BE EF	03	06 00	86 DE	01 00	32 20	04 00
	Get		BE EF	03	06 00	75 DC	02 00	32 20	00 00
AUDIO - VIDEO	Set	TURN OFF	BE EF	03	06 00	02 DC	01 00	31 20	00 00
		AUDIO1	BE EF	03	06 00	92 DD	01 00	31 20	01 00
		AUDIO2	BE EF	03	06 00	62 DD	01 00	31 20	02 00
		AUDIO3	BE EF	03	06 00	F2 DC	01 00	31 20	03 00
		AUDIO4	BE EF	03	06 00	C2 DE	01 00	31 20	04 00
	Get		BE EF	03	06 00	31 DC	02 00	31 20	00 00
AUDIO OUT STANDBY	Set	TURN OFF	BE EF	03	06 00	EA DE	01 00	3F 20	00 00
		AUDIO1	BE EF	03	06 00	7A DF	01 00	3F 20	01 00
		AUDIO2	BE EF	03	06 00	8A DF	01 00	3F 20	02 00
		AUDIO3	BE EF	03	06 00	1A DE	01 00	3F 20	03 00
		AUDIO4	BE EF	03	06 00	2A DC	01 00	3F 20	04 00
	Get		BE EF	03	06 00	D9 DE	02 00	3F 20	00 00
HDMI AUDIO	Set	1	BE EF	03	06 00	AE C6	01 00	40 20	01 00
		2	BE EF	03	06 00	5E C6	01 00	40 20	02 00
	Get		BE EF	03	06 00	0D C7	02 00	40 20	00 00
REMOTE FRONT	Set	Off	BE EF	03	06 00	FF 32	01 00	00 26	00 00
		On	BE EF	03	06 00	6F 33	01 00	00 26	01 00
	Get		BE EF	03	06 00	CC 32	02 00	00 26	00 00
REMOTE REAR	Set	Off	BE EF	03	06 00	03 33	01 00	01 26	00 00
		On	BE EF	03	06 00	93 32	01 00	01 26	01 00
	Get		BE EF	03	06 00	30 33	02 00	01 26	00 00
REMOTE TOP	Set	Off	BE EF	03	06 00	47 33	01 00	02 26	00 00
		On	BE EF	03	06 00	D7 32	01 00	02 26	01 00
	Get		BE EF	03	06 00	74 33	02 00	02 26	00 00
REMOTE FREQUENCY NORMAL	Set	Disable	BE EF	03	06 00	FF 3D	01 00	30 26	00 00
		Enable	BE EF	03	06 00	6F 3C	01 00	30 26	01 00
	Get		BE EF	03	06 00	CC 3D	02 00	30 26	00 00
REMOTE FREQUENCY HIGH	Set	Disable	BE EF	03	06 00	03 3C	01 00	31 26	00 00
		Enable	BE EF	03	06 00	93 3D	01 00	31 26	01 00
	Get		BE EF	03	06 00	30 3C	02 00	31 26	00 00

Names	Operation Type		Header			CRC	Command Data		
							Action	Type	Setting Code
LANGUAGE	Set	ENGLISH	BE EF	03	06 00	F7 D3	01 00	05 30	00 00
		FRANCAIS	BE EF	03	06 00	67 D2	01 00	05 30	01 00
		DEUTSCH	BE EF	03	06 00	97 D2	01 00	05 30	02 00
		ESPANOL	BE EF	03	06 00	07 D3	01 00	05 30	03 00
		ITALIANO	BE EF	03	06 00	37 D1	01 00	05 30	04 00
		NORSK	BE EF	03	06 00	A7 D0	01 00	05 30	05 00
		NEDERLANDS	BE EF	03	06 00	57 D0	01 00	05 30	06 00
		PORTUGUESE	BE EF	03	06 00	C7 D1	01 00	05 30	07 00
		日本語	BE EF	03	06 00	37 D4	01 00	05 30	08 00
		简体中文	BE EF	03	06 00	A7 D5	01 00	05 30	09 00
		繁體中文	BE EF	03	06 00	37 DE	01 00	05 30	10 00
		한글	BE EF	03	06 00	57 D5	01 00	05 30	0A 00
		SVENSKA	BE EF	03	06 00	C7 D4	01 00	05 30	0B 00
		PYCCKNN	BE EF	03	06 00	F7 D6	01 00	05 30	0C 00
		SUOMI	BE EF	03	06 00	67 D7	01 00	05 30	0D 00
		POLSKI	BE EF	03	06 00	97 D7	01 00	05 30	0E 00
		TÜRKÇE	BE EF	03	06 00	07 D6	01 00	05 30	0F 00
	Get		BE EF	03	06 00	C4 D3	02 00	05 30	00 00
MENU POSITION V	Get		BE EF	03	06 00	40 D7	02 00	16 30	00 00
	Increment		BE EF	03	06 00	26 D7	04 00	16 30	00 00
	Decrement		BE EF	03	06 00	F7 D6	05 00	16 30	00 00
MENU POSITION V Reset	Execute		BE EF	03	06 00	A8 C7	06 00	44 70	00 00
MENU POSITION H	Get		BE EF	03	06 00	04 D7	02 00	15 30	00 00
	Increment		BE EF	03	06 00	62 D7	04 00	15 30	00 00
	Decrement		BE EF	03	06 00	B3 D6	05 00	15 30	00 00
MENU POSITION H Reset	Execute		BE EF	03	06 00	DC C6	06 00	43 70	00 00
BLANK	Set	MyScreen	BE EF	03	06 00	FB CA	01 00	00 30	20 00
		ORIGINAL	BE EF	03	06 00	FB E2	01 00	00 30	40 00
		BLUE	BE EF	03	06 00	CB D3	01 00	00 30	03 00
		WHITE	BE EF	03	06 00	6B D0	01 00	00 30	05 00
		BLACK	BE EF	03	06 00	9B D0	01 00	00 30	06 00
	Get		BE EF	03	06 00	08 D3	02 00	00 30	00 00
BLANK On/Off	Set	TURN OFF	BE EF	03	06 00	FB D8	01 00	20 30	00 00
		TURN ON	BE EF	03	06 00	6B D9	01 00	20 30	01 00
	Get		BE EF	03	06 00	C8 D8	02 00	20 30	00 00
START UP	Set	MyScreen	BE EF	03	06 00	CB CB	01 00	04 30	20 00
		ORIGINAL	BE EF	03	06 00	0B D2	01 00	04 30	00 00
		TURN OFF	BE EF	03	06 00	9B D3	01 00	04 30	01 00
	Get		BE EF	03	06 00	38 D2	02 00	04 30	00 00
MyScreen LOCK	Set	TURN OFF	BE EF	03	06 00	3B EF	01 00	C0 30	00 00
		TURN ON	BE EF	03	06 00	AB EE	01 00	C0 30	01 00
	Get		BE EF	03	06 00	08 EF	02 00	C0 30	00 00
MESSAGE	Set	TURN OFF	BE EF	03	06 00	8F D6	01 00	17 30	00 00
		TURN ON	BE EF	03	06 00	1F D7	01 00	17 30	01 00
	Get		BE EF	03	06 00	BC D6	02 00	17 30	00 00

RS-232C Communication / Network command table

Names	Operation Type		Header			CRC	Command Data		
							Action	Type	Setting Code
TEMPLATE	Set	TEST PATTERN	BE EF	03	06 00	43 D9	01 00	22 30	00 00
		DOT-LINE1	BE EF	03	06 00	D3 D8	01 00	22 30	01 00
		DOT-LINE2	BE EF	03	06 00	23 D8	01 00	22 30	02 00
		DOT-LINE3	BE EF	03	06 00	B3 D9	01 00	22 30	03 00
		DOT-LINE4	BE EF	03	06 00	83 DB	01 00	22 30	04 00
	Get		BE EF	03	06 00	70 D9	02 00	22 30	00 00
TEMPLATE on/off	Set	TURN OFF	BE EF	03	06 00	BF D8	01 00	23 30	00 00
		TURN ON	BE EF	03	06 00	2F D9	01 00	23 30	01 00
	Get		BE EF	03	06 00	8C D8	02 00	23 30	00 00
PbyP	Set	TURN OFF	BE EF	03	06 00	3E 26	01 00	10 23	00 00
		TURN ON	BE EF	03	06 00	AE 27	01 00	10 23	01 00
	Get		BE EF	03	06 00	0D 26	02 00	10 23	00 00
PbyP RIGHT SOURCE	Set	RGB1	BE EF	03	06 00	86 27	01 00	12 23	00 00
		RGB2	BE EF	03	06 00	46 25	01 00	12 23	04 00
		HDMI	BE EF	03	06 00	76 27	01 00	12 23	03 00
		COMPONENT	BE EF	03	06 00	D6 24	01 00	12 23	05 00
		S-VIDEO	BE EF	03	06 00	E6 26	01 00	12 23	02 00
		VIDEO	BE EF	03	06 00	16 26	01 00	12 23	01 00
	Get		BE EF	03	06 00	B5 27	02 00	12 23	00 00
PbyP MAIN AREA	Set	LEFT	BE EF	03	06 00	7A 26	01 00	13 23	00 00
		RIGHT	BE EF	03	06 00	EA 27	01 00	13 23	01 00
	Get		BE EF	03	06 00	49 26	02 00	13 23	00 00
PbyP LEFT SOURCE	Set	RGB1	BE EF	03	06 00	F2 26	01 00	15 23	00 00
		RGB2	BE EF	03	06 00	32 24	01 00	15 23	04 00
		HDMI	BE EF	03	06 00	02 26	01 00	15 23	03 00
		COMPONENT	BE EF	03	06 00	A2 25	01 00	15 23	05 00
		S-VIDEO	BE EF	03	06 00	92 27	01 00	15 23	02 00
		VIDEO	BE EF	03	06 00	62 27	01 00	15 23	01 00
	Get		BE EF	03	06 00	C1 26	02 00	15 23	00 00
PbyP SWAP	Execute		BE EF	03	06 00	01 27	06 00	16 23	00 00
AUTO SEARCH	Set	TURN OFF	BE EF	03	06 00	B6 D6	01 00	16 20	00 00
		TURN ON	BE EF	03	06 00	26 D7	01 00	16 20	01 00
	Get		BE EF	03	06 00	85 D6	02 00	16 20	00 00
AUTO OFF	Get		BE EF	03	06 00	08 86	02 00	10 31	00 00
	Increment		BE EF	03	06 00	6E 86	04 00	10 31	00 00
	Decrement		BE EF	03	06 00	BF 87	05 00	10 31	00 00
AUTO ON	Set	TURN OFF	BE EF	03	06 00	3B 89	01 00	20 31	00 00
		TURN ON	BE EF	03	06 00	AB 88	01 00	20 31	01 00
	Get		BE EF	03	06 00	08 89	02 00	20 31	00 00
LAMP TIME	Get		BE EF	03	06 00	C2 FF	02 00	90 10	00 00
LAMP TIME Reset	Execute		BE EF	03	06 00	58 DC	06 00	30 70	00 00
FILTER TIME	Get		BE EF	03	06 00	C2 F0	02 00	A0 10	00 00
FILTER TIME Reset	Execute		BE EF	03	06 00	98 C6	06 00	40 70	00 00

Names	Operation Type		Header			CRC	Command Data		
							Action	Type	Setting Code
MY BUTTON-1	Set	RGB1	BE EF	03	06 00	3A 33	01 00	00 36	00 00
		RGB2	BE EF	03	06 00	FA 31	01 00	00 36	04 00
		HDMI	BE EF	03	06 00	CA 33	01 00	00 36	03 00
		COMPONENT	BE EF	03	06 00	6A 30	01 00	00 36	05 00
		S-VIDEO	BE EF	03	06 00	5A 32	01 00	00 36	02 00
		VIDEO	BE EF	03	06 00	AA 32	01 00	00 36	01 00
		INFORMATION	BE EF	03	06 00	FA 3E	01 00	00 36	10 00
		AUTO KEYSTONE EXECUTE	BE EF	03	06 00	6A 3F	01 00	00 36	11 00
		MY MEMORY	BE EF	03	06 00	9A 3F	01 00	00 36	12 00
		PICTURE MODE	BE EF	03	06 00	0A 3E	01 00	00 36	13 00
		FILTER RESET	BE EF	03	06 00	3A 3C	01 00	00 36	14 00
		ACTIVE IRIS	BE EF	03	06 00	AA 3D	01 00	00 36	15 00
		MY IMAGE	BE EF	03	06 00	5A 3D	01 00	00 36	16 00
		AV MUTE	BE EF	03	06 00	AA 38	01 00	00 36	19 00
		PbyP SWAP	BE EF	03	06 00	5A 38	01 00	00 36	1A 00
		TEMPLATE	BE EF	03	06 00	CA 39	01 00	00 36	1B 00
	Get		BE EF	03	06 00	09 33	02 00	00 36	00 00
MY BUTTON-2	Set	RGB1	BE EF	03	06 00	C6 32	01 00	01 36	00 00
		RGB2	BE EF	03	06 00	06 30	01 00	01 36	04 00
		HDMI	BE EF	03	06 00	36 32	01 00	01 36	03 00
		COMPONENT	BE EF	03	06 00	96 31	01 00	01 36	05 00
		S-VIDEO	BE EF	03	06 00	A6 33	01 00	01 36	02 00
		VIDEO	BE EF	03	06 00	56 33	01 00	01 36	01 00
		INFORMATION	BE EF	03	06 00	06 3F	01 00	01 36	10 00
		AUTO KEYSTONE EXECUTE	BE EF	03	06 00	96 3E	01 00	01 36	11 00
		MY MEMORY	BE EF	03	06 00	66 3E	01 00	01 36	12 00
		PICTURE MODE	BE EF	03	06 00	F6 3F	01 00	01 36	13 00
		FILTER RESET	BE EF	03	06 00	C6 3D	01 00	01 36	14 00
		ACTIVE IRIS	BE EF	03	06 00	56 3C	01 00	01 36	15 00
		MY IMAGE	BE EF	03	06 00	A6 3C	01 00	01 36	16 00
		AV MUTE	BE EF	03	06 00	56 39	01 00	01 36	19 00
		PbyP SWAP	BE EF	03	06 00	A6 39	01 00	01 36	1A 00
		TEMPLATE	BE EF	03	06 00	36 38	01 00	01 36	1B 00
	Get		BE EF	03	06 00	F5 32	02 00	01 36	00 00
MY SOURCE	Set	RGB1	BE EF	03	06 00	FA 38	01 00	20 36	00 00
		RGB2	BE EF	03	06 00	3A 3A	01 00	20 36	04 00
		HDMI	BE EF	03	06 00	0A 38	01 00	20 36	03 00
		COMPONENT	BE EF	03	06 00	AA 3B	01 00	20 36	05 00
		S-VIDEO	BE EF	03	06 00	9A 39	01 00	20 36	02 00
		VIDEO	BE EF	03	06 00	6A 39	01 00	20 36	01 00
	Get		BE EF	03	06 00	C9 38	02 00	20 36	00 00
MAGNIFY	Get		BE EF	03	06 00	7C D2	02 00	07 30	00 00
	Increment		BE EF	03	06 00	1A D2	04 00	07 30	00 00
	Decrement		BE EF	03	06 00	CB D3	05 00	07 30	00 00
FREEZE	Set	NORMAL	BE EF	03	06 00	83 D2	01 00	02 30	00 00
		FREEZE	BE EF	03	06 00	13 D3	01 00	02 30	01 00
	Get		BE EF	03	06 00	B0 D2	02 00	02 30	00 00

Names	Operation Type		Header			CRC	Command Data		
							Action	Type	Setting Code
CLOSED CAPTION DISPLAY	Set	TURN OFF	BE EF	03	06 00	FA 62	01 00	00 37	00 00
		TURN ON	BE EF	03	06 00	6A 63	01 00	00 37	01 00
		AUTO	BE EF	03	06 00	9A 63	01 00	00 37	02 00
	Get		BE EF	03	06 00	C9 62	02 00	00 37	00 00
CLOSED CAPTION MODE	Set	CAPTIONS	BE EF	03	06 00	06 63	01 00	01 37	00 00
		TEXT	BE EF	03	06 00	96 62	01 00	01 37	01 00
	Get		BE EF	03	06 00	35 63	02 00	01 37	00 00
CLOSED CAPTION CHANNEL	Set	1	BE EF	03	06 00	D2 62	01 00	02 37	01 00
		2	BE EF	03	06 00	22 62	01 00	02 37	02 00
		3	BE EF	03	06 00	B2 63	01 00	02 37	03 00
		4	BE EF	03	06 00	82 61	01 00	02 37	04 00
	Get		BE EF	03	06 00	71 63	02 00	02 37	00 00
MY IMAGE	Set	OFF	BE EF	03	06 00	3A C3	01 00	00 35	00 00
		IMAGE-1	BE EF	03	06 00	AA C2	01 00	00 35	01 00
		IMAGE-2	BE EF	03	06 00	5A C2	01 00	00 35	02 00
		IMAGE-3	BE EF	03	06 00	CA C3	01 00	00 35	03 00
		IMAGE-4	BE EF	03	06 00	FA C1	01 00	00 35	04 00
	Get		BE EF	03	06 00	09 C3	02 00	00 35	00 00
MY IMAGE IMAGE-1 Delete	Execute		BE EF	03	06 00	71 C3	06 00	01 35	00 00
MY IMAGE IMAGE-2 Delete	Execute		BE EF	03	06 00	35 C3	06 00	02 35	00 00
MY IMAGE IMAGE-3 Delete	Execute		BE EF	03	06 00	C9 C2	06 00	03 35	00 00
MY IMAGE IMAGE-4 Delete	Execute		BE EF	03	06 00	BD C3	06 00	04 35	00 00

Projector

CP-WUX645N

User's Manual (concise)

ENGLISH

Thank you for purchasing this projector.

⚠WARNING

►Before using this product, be sure to read all manuals for this product. See “Using the CD manual” (📖*13*) to read the manuals in the CD. After reading them, store them in a safe place for future reference.

►The manufacturer assumes no responsibility for any damage caused by mishandling that is beyond normal usage defined in these manuals of this projector.

Contents

	📖		📖
Contents of package	1	Turning off the power	8
First of all	2	Lamp	9
Arrangement	3	Air filter	11
Connecting your devices	4	Internal clock battery	12
Connecting power supply	5	Using the CD manual	13
Turning on the power	5	Regulatory notices	14
Adjusting the projector’s elevator	6	Specifications	16
Remote control	6	Warranty and after-service	17
Displaying the picture	8		

Contents of package

Your projector should come with the items shown below. Check that all the items are included. Require of your dealer immediately if any items are missing.

(1) Remote control with two AA batteries

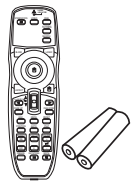
(2) Power cord

(3) RGB cable

(4) User’s manuals (Book x1, CD x1)

(5) Security label

(1)



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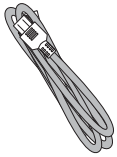

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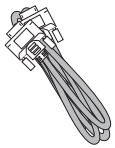


(4)

(5)

⚠CAUTION

►Keep the original packing materials for future reshipment. Be sure to use the original packing materials when moving the projector. Use special caution for the lens. Be sure to use a lens cover.

First of all

Entries and graphical symbols explanation

The following entries and graphical symbols are used for the manuals and the product as follows, for safety purpose. Please know their meanings beforehand, and heed them.

⚠**WARNING**	This entry warns of a risk of serious personal injury or even death.
⚠**CAUTION**	This entry warns of a risk of personal injury or physical damage.
NOTICE	This entry notices of fear of causing trouble.

Important safety instruction

The followings are important instructions for safely using the product. Be sure to follow them always when handling the product. The manufacturer assumes no responsibility for any damage caused by mishandling that is beyond normal usage defined in these manuals of this projector.

⚠**WARNING** ►Never use the product in or after an abnormality (ex. giving off smoke, smelling strange, took a liquid or an object inside, broken, etc.) If an abnormality should occur, unplug the projector urgently.

►Situate the product away from children and pets.

►Do not use the product when there is fear of a thunderbolt.

►Unplug the projector from the power outlet if the projector is not used for the time being.

►Do not open or remove any portion of the product, unless the manuals direct it. For internal maintenance, leave it to your dealer or their service personnel.

►Use only the accessories specified or recommended by the manufacturer.

►Modify neither the projector nor accessories.

►Let neither any things nor any liquids enter to the inside of the product.

►Do not wet the product.

►Do not place the projector where any oils, such as cooking or machine oil, are used. Oil may harm the product, resulting in malfunction, or falling from the mounted position.

►Apply neither a shock nor pressure to this product.

- Do not place the product on an unstable place such as the uneven surface or the leaned table.
- Do not place the product unstably. Place the projector so that it does not protrude from the surface where the projector is placed on.
- Remove all the attachments including the power cord and cables, from the projector when carrying the projector.

►Do not look into the lens and the openings on the projector, while the lamp is on.

►Do not approach the lamp cover and the exhaust vents, while the projection lamp is on. Also after the lamp goes out, do not approach them for a while, since too hot.

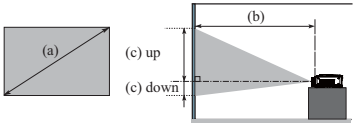
Arrangement

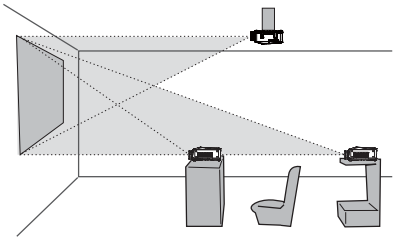
Please arrange the projector and the screen.
Install the projector in a stable, cool and airy place, keeping a space of 30 cm or more between the sides of the projector and other objects such as walls. Avoid the projector from a hot, humid, dusty, or smoky place.

Refer to the illustrations and tables below to determine screen size and projection distance.
The values shown in the table are calculated for a full size screen: 1920x1200

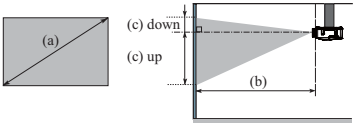
(a) Screen size (diagonal)
(b) Projection distance (±10%)
(c) Screen height (±10%), when the vertical lens shift is set full upward.

On a horizontal surface





Suspended from the ceiling



• Consult with your dealer before a special installation such as suspending from a ceiling.

(a) Screen size [inch (m)]	16:10 screen								4:3 screen							
	(b) Projection distance [m (inch)]				(c) Screen height [cm (inch)]				(b) Projection distance [m (inch)]				(c) Screen height [cm (inch)]			
	min.		max.		down		up		min.		max.		down		up	
30 (0.8)	0.9	(37)	1.9	(75)	0	(0)	40	(16)	1.1	(42)	2.1	(84)	0	(0)	46	(18)
40 (1.0)	1.3	(49)	2.5	(100)	0	(0)	54	(21)	1.4	(56)	2.9	(113)	0	(0)	61	(24)
60 (1.5)	1.9	(75)	3.8	(150)	0	(0)	81	(32)	2.2	(85)	4.3	(170)	0	(0)	91	(36)
70 (1.8)	2.2	(87)	4.4	(175)	0	(0)	94	(37)	2.5	(99)	5.0	(198)	0	(0)	107	(42)
80 (2.0)	2.5	(100)	5.1	(200)	0	(0)	108	(42)	2.9	(113)	5.8	(227)	0	(0)	122	(48)
90 (2.3)	2.9	(113)	5.7	(225)	0	(0)	121	(48)	3.2	(128)	6.5	(255)	0	(0)	137	(54)
100 (2.5)	3.2	(125)	6.4	(250)	0	(0)	135	(53)	3.6	(142)	7.2	(283)	0	(0)	152	(60)
120 (3.0)	3.8	(150)	7.6	(300)	0	(0)	162	(64)	4.3	(170)	8.6	(340)	0	(0)	183	(72)
150 (3.8)	4.8	(188)	9.5	(376)	0	(0)	202	(79)	5.4	(213)	10.8	(426)	0	(0)	229	(90)
200 (5.1)	6.4	(252)	12.7	(501)	0	(0)	269	(106)	7.2	(285)	14.4	(568)	0	(0)	305	(120)
250 (6.4)	8.0	(315)	15.9	(627)	0	(0)	337	(132)	9.1	(356)	18.0	(710)	0	(0)	381	(150)
300 (7.6)	9.6	(378)	19.1	(752)	0	(0)	404	(159)	10.9	(428)	21.6	(852)	0	(0)	457	(180)
350 (8.9)	11.2	(441)	22.3	(878)	0	(0)	471	(185)	12.7	(499)	25.2	(994)	0	(0)	533	(210)

⚠WARNING

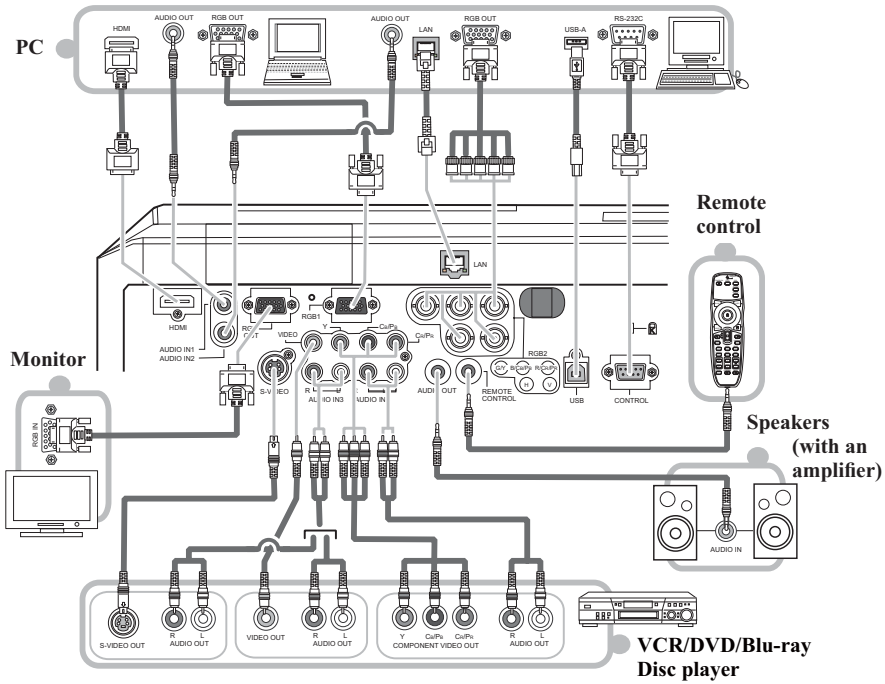
►Install the projector in a stable horizontal position.
►Place the projector in a cool place, and ensure that there is sufficient ventilation. Do not place or attach anything that would block the lens or vent holes.
►Do not place the projector any place where it may get wet.
►Do not place the projector where any oils, such as cooking or machine oil, are used.

⚠CAUTION

►Avoid placing the projector in smoky, humid or dusty place.
►Position the projector to prevent light from directly hitting the projector's remote sensor.

Connecting your devices

Before connecting devices, please read the manuals for all the devices that you want to connect with this projector, to make sure that the connection is proper and prepare the connectors needed. And connect them properly according to the manuals.



⚠WARNING

►Do not disassemble or modify the projector and accessories.

►Be careful not to damage the cables, and do not use damaged cables.

⚠CAUTION

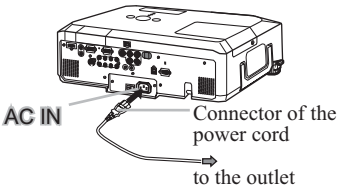
►Turn off all devices and unplug their power cords prior to connecting them to projector.

►Use appropriate accessory or designated cables. Ask your dealer about non-accessory cables which may be required a specific length or a ferrite core by the regulations. For cables with a core only at one end, connect the end with the core to the projector.

►Make sure that devices are connected to the correct ports.

Connecting power supply

1. Connect the connector of the power cord to the AC IN (AC inlet) of the projector.
2. Firmly plug the power cord's plug into the outlet.



⚠WARNING

►Please use extra caution when connecting the power cord, as incorrect or faulty connections may result in fire and/or electrical shock.

• Only use the power cord that came with the projector. If it is damaged, consult your dealer to get a new one.

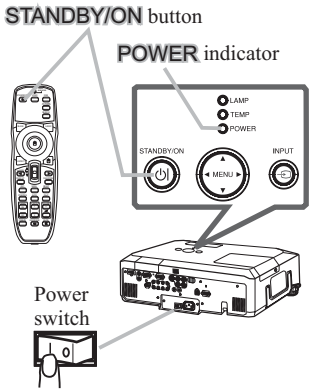
• Only plug the power cord into an outlet whose voltage is matched to the power cord. The power outlet should be close to the projector and easily accessible. Remove the power cord for complete separation.

• Never modify the power cord.

Turning on the power

1. Make sure that the power cord is firmly and correctly connected to the projector and the outlet.
2. Remove the lens cover, and set the power switch to the ON position (marked " I ").
   The POWER indicator will light up in steady orange. Then wait several seconds because the buttons may not function for these several seconds.
3. Press the STANDBY/ON button on the projector or the remote control.

The projection lamp will light up and the POWER indicator will begin blinking in green. When the power is completely on, the indicator will stop blinking and light in steady green.



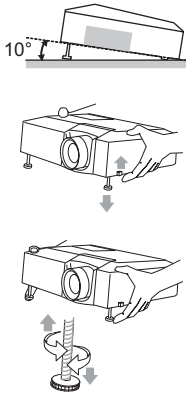
⚠WARNING

►A strong light is emitted when the projector's power is on. Do not look into the lens of the projector or look inside of the projector through any of the projector's openings.

NOTE

• When the AUTO ON in the OPTION menu is set to the TURN ON, and the power was turned off by the power switch last time, turning the power switch on makes the projection lamp light on without pushing the STANDBY/ON button. For more information, please see the "Operating Guide" in the CD.

Adjusting the projector's elevator



Use the elevator feet to place the projector horizontally. Using the feet can also tilt the projector in order to project at a suitable angle to the screen, elevating the front side of the projector within 10 degrees.
This projector has 2 elevator feet and 2 elevator knobs. An elevator foot is adjustable while pulling up the elevator knob on the same side as it.

1. To loose an elevator foot, pull up the elevator knob on the same side as it.
2. Position the front side of the projector to the desired height.
3. Release the elevator knobs in order to lock the elevator feet.
4. To finely adjust, twist the foot.

⚠WARNING

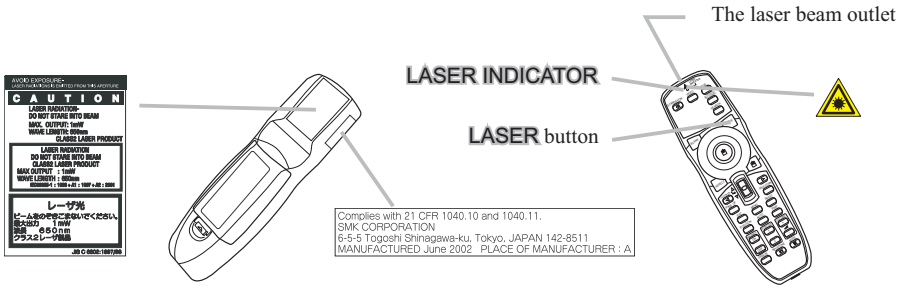
►Do not handle the elevator knobs without holding the projector, since the projector may drop down.

►Do not tilt the projector other than elevating its front within 10 degrees using the adjuster feet. A tilt of the projector exceeding the restriction could cause malfunction or shortening the lifetime of consumables, or the projector itself.

Remote control

Laser pointer

The laser beam is emitted and the LASER INDICATOR lights while the LASER button is pressed.


The laser beam outlet
LASER INDICATOR
LASER button
CAUTION
Complies with 21 CFR 1040.10 and 1040.11.
SMK CORPORATION
6-5-5 Togoshi Shinagawa-ku, Tokyo, JAPAN 142-8511
MANUFACTURED June 2002 PLACE OF MANUFACTURER : A

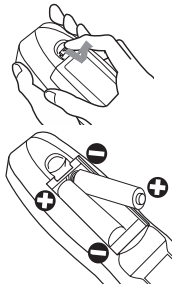
⚠WARNING

►Never hit an eye with the laser beam, and use the laser pointer except to serve as a pointer to a screen. The laser beam can cause vision problems, and also may cause radiation exposure.

Putting batteries

Please load the batteries before using the remote control.

1. Slide back and remove the battery cover.
2. Put the two AA batteries (**HITACHI MAXELL, Part No.LR6 or R6P**) into the holder, according to the polarity markings (+) and (-) on the holder.
3. Put the battery cover back to its former state.



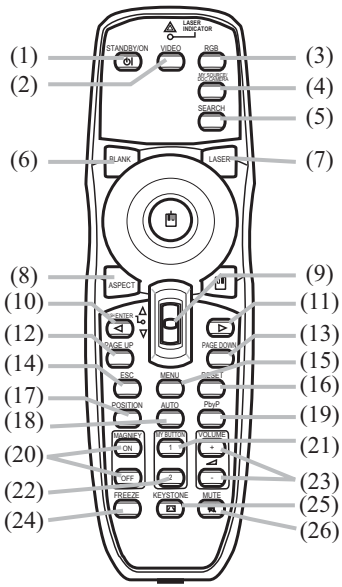
⚠WARNING

►Always handle the batteries with care and use them only as directed. Improper use may result in battery explosion, cracking or leakage, which could result in fire, injury and/or pollution of the surrounding environment.

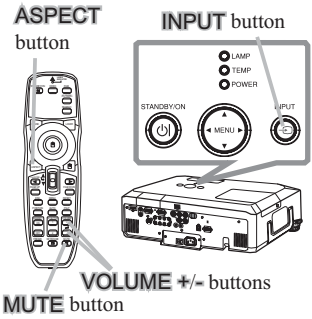
• Be sure to use only the batteries specified. Do not use batteries of different types at the same time. Do not mix a new battery with used one.
• Make sure the plus and minus terminals are correctly aligned when loading a battery.
• Keep a battery away from children and pets.
• Do not recharge, short circuit, solder or disassemble a battery.
• Do not place a battery in a fire or water. Keep batteries in a dark, cool and dry place.
• If you observe battery leakage, wipe out the leakage and then replace a battery. If the leakage adheres to your body or clothes, rinse well with water immediately.
• Obey the local laws on disposing the battery.

Buttons

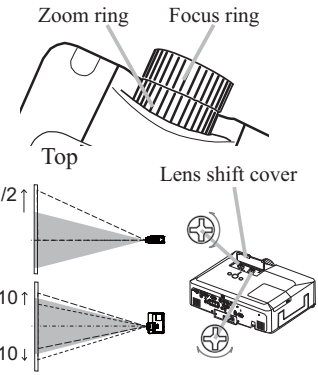
(1) STANDBY/ON button
(2) VIDEO button (3) RGB button
(4) MY SOURCE/DOC.CAMERA button
(5) SEARCH button (6) BLANK button
(7) LASER button (8) ASPECT button
(9) Lever switch : acting 3 functions as below.
Cursor button ▲ : to slide toward the side marked ▲.
Cursor button ▼ : to slide toward the side marked ▼.
ENTER button : to push down the center point.
(10) Cursor button ◄ (11) Cursor button ►
(12) PAGE UP button (13) PAGE DOWN button
(14) ESC button (15) MENU button
(16) RESET button (17) POSITION button
(18) AUTO button (19) PbyP button
(20) MAGNIFY ON/OFF button
(21) MY BUTTON 1 button (22) MY BUTTON 2 button
(23) VOLUME +/- button (24) FREEZE button
(25) KEYSTONE button (26) MUTE button



Displaying the picture



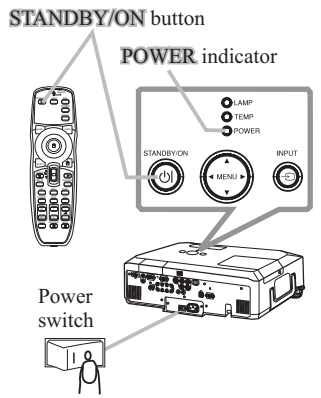
1. Make sure that the signal source is sending the signal to the projector.
2. Use the VOLUME +/- buttons to adjust the volume. To have the projector silent, press the MUTE button on the remote control.
3. Press the INPUT button on the projector.
   Each time you press the button, the projector switches its input port in turn.
4. Press the ASPECT button on the remote control. Each time you press the button, the projector switches the mode for aspect ratio in turn.
5. Use the zoom ring to adjust the screen size.
6. Use the focus ring to focus the picture.
7. Use the vertical lens shift dial to shift the picture upward or downward. It is recommended to adjust the picture upward.
8. Use the horizontal lens shift dial to shift the picture left or right.



⚠CAUTION

►If you wish to have a blank screen while the projector's lamp is on, use the BLANK function. (See the "Operating Guide" in the CD.) Any other method of blocking the projection light, such as attaching something to the lens or placing something in front of the lens, may cause the damage to the projector.

Turning off the power



1. Press the STANDBY/ON button on the projector or the remote control.
   The message "Power off?" will appear on the screen for about 5 seconds.
2. Press the STANDBY/ON button on the projector or the remote control again while the message appears.
   The projector lamp will go off, and the POWER indicator will begin blinking in orange.
   Then the POWER indicator will stop blinking and light in steady orange when the lamp cooling is complete.
3. Make sure that the POWER indicator lights in steady orange, and set the power switch to the OFF position (marked "O").
   The POWER indicator will go off. Attach the lens cover.

Do not turn the projector on for 10 minutes or more after turning it off. Also, do not turn the projector off shortly after turning it on. Such operations might cause the lamp to malfunction or shorten the lifetime of some parts including the lamp.

⚠WARNING

►Do not touch around the lamp cover and the exhaust vents during use or just after use, since it is too hot.

Lamp

A lamp has finite product life. Using the lamp for long periods of time could cause the pictures darker or the color tone poor. Note that each lamp has a different lifetime, and some may burst or burn out soon after you start using them.
Preparation of a new lamp and early replacement are recommended. To prepare a new lamp, make contact with your dealer and tell the lamp type number.

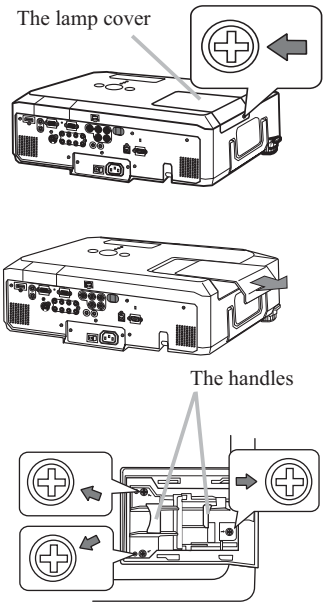
Type number = DT00873

Replacing the lamp

1. Turn the projector off, and unplug the power cord. Allow the projector to cool for at least 45 minutes.
2. Prepare a new lamp.
   If the projector is mounted on a ceiling, or if the lamp has broken, also ask the dealer to replace the lamp.

In case of replacement by yourself,

3. Loosen the screw (marked by arrow) of the lamp cover and then slide the lamp cover to the side to remove it.
4. Loosen the 3 screws (marked by arrow) of the lamp, and slowly pick up the lamp by the handles.
5. Insert the new lamp, and retighten firmly the 3 screws of the lamp that are loosened in the previous process to lock it in place.
6. Slide the lamp cover back in place and firmly fasten the screw of the lamp cover.
7. Turn the projector on and reset the lamp time using the LAMP TIME item in the OPTION menu.
   (1) Press the MENU button to display a menu.
   (2) Point at the "Go to Advanced Menu …" in the menu using the ▼/▲ button, then press the ► button.
   (3) Point at the "OPTION" in the left column of the menu using the ▼/▲button, then press the ► button.
   (4) Point at the "LAMP TIME" using the ▼/▲ button, then press the ► button. A dialog will appear.
   (5) Press the ▲ button to select "RESET" on the dialog. It performs resetting the lamp time.



NOTE

• Please reset the lamp time only when you have replaced the lamp, for a suitable indication about the lamp.

Lamp warning

⚠ HIGH VOLTAGE ⚠ HIGH TEMPERATURE ⚠ HIGH PRESSURE

►The projector uses a high-pressure mercury glass lamp. The lamp can break with a loud bang, or burn out, if jolted or scratched, handled while hot, or worn over time. Note that each lamp has a different lifetime, and some may burst or burn out soon after you start using them. In addition, if the bulb bursts, it is possible for shards of glass to fly into the lamp housing, and for gas containing mercury and dust containing fine particles of glass to escape from the projector's vent holes.

► **About disposal of a lamp:** This product contains a mercury lamp; do not put it in a trash. Dispose of it in accordance with environmental laws.
· For lamp recycling, go to www.lamprecycle.org (in the US).
· For product disposal, consult your local government agency or www.eiae.org (in the US) or www.epsc.ca (in Canada).
For more information, ask your dealer.

Disconnect the plug from the power outlet

- If the lamp should break (it will make a loud bang when it does), Unplug the power cord from the outlet, and make sure to request a replacement lamp from your local dealer. Note that shards of glass could damage the projector's internals, or cause injury during handling, so please do not try to clean the projector or replace the lamp yourself.
- If the lamp should break (it will make a loud bang when it does), ventilate the room well, and make sure not to inhale the gas or fine particles that come out from the projector's vent holes, and not to get them into your eyes or mouth.
- Before replacing the lamp, turn the projector off and unplug the power cord, then wait at least 45 minutes for the lamp to cool sufficiently. Handling the lamp while hot can cause burns, as well as damaging the lamp.

- Never unscrew except the appointed (marked by an arrow) screws.
- Do not open the lamp cover while the projector is suspended from a ceiling. This is dangerous, since if the lamp's bulb has broken, the shards will fall out when the cover is opened. In addition, working in high places is dangerous, so ask your local dealer to have the lamp replaced even if the bulb is not broken.
- Do not use the projector with the lamp cover removed. At the lamp replacing, make sure that the screws are screwed in firmly. Loose screws could result in damage or injury.

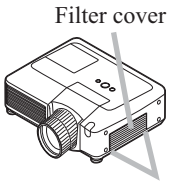
- Use only the lamp of the specified type. Use of a lamp that does not meet the lamp specifications for this model could cause a fire, damage or shorten the life of this product.
- If the lamp breaks soon after the first time it is used, it is possible that there are electrical problems elsewhere besides the lamp. If this happens, consult your local dealer or a service representative.
- Handle with care: jolting or scratching could cause the lamp bulb to burst during use.
- Using the lamp for long periods of time, could cause it dark, not to light up or to burst. When the pictures appear dark, or when the color tone is poor, please replace the lamp as soon as possible. Do not use old (used) lamps; this is a cause of breakage.

Air filter

Please check and clean the air filter periodically. When the indicators or a message prompts you to clean the air filter, comply with it as soon as possible. The air filter has two kinds of filters inside. Replace the filters when they are damaged or too soiled. To prepare the new filters, make contact with your dealer and tell the following type number.

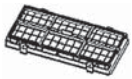
Type number = MU05661

When you replace the lamp, please replace the air filter. An air filter of specified type will come together with a replacement lamp for this projector.



1. Turn the projector off, and unplug the power cord. Allow the projector to sufficiently cool down.
2. Use a vacuum cleaner on and around the filter cover.
3. Pull the filter cover knobs while lifting it, to take the filter unit off.
4. Use a vacuum cleaner for the filter vent of the projector and both sides of the filter unit.

Filter cover knobs



Filter unit

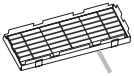
If the filters are damaged or too soiled, replace them according to the following procedure number 5 to 7. Otherwise, please jump to the procedure number 8.

Filter frame

5. Pull the filter frame's knob up while holding the filter cover to remove the filter frame, then take the filters out.
6. Set new filters where former filters were. Put the larger meshed filter into a filter cover first. Then put the finer meshed filter on the larger meshed one.
7. Put the filter frame back where it was.
8. Put the filter unit back into the projector.

Filter (finer meshed)

Filter (larger meshed)



Filter cover

9. Turn the projector on and reset the filter time using the FILTER TIME item in the EASY MENU.
   (1) Press the MENU button to display a menu.
   (2) Point at the "FILTER TIME" using the ▼/▲ button, then press the ► button. A dialog will appear.
   (3) Press the ▲ button to select RESET on the dialog. It performs resetting the filter time.

⚠WARNING

►Before taking care of the air filter, make sure the power cable is not plugged in, then allow the projector to cool sufficiently.

►Use only the air filter of the specified type. Do not use the projector without the air filter or the filter cover. It could result in a fire or malfunction to the projector.

►Clean the air filter periodically. If the air filter becomes clogged by dust or the like, internal temperatures rise and could cause a fire, a burn or malfunction to the projector.

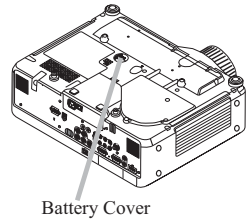
NOTE • Please reset the filter time only when you have cleaned or replaced the air filter, for a suitable indication about the air filter.

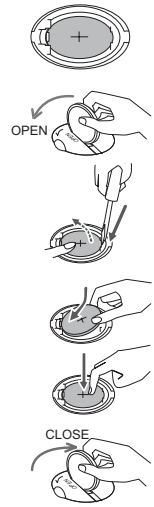
• The projector may display the message such as "CHECK THE AIR FLOW" or turn off the projector, to prevent the internal heat level rising.

Internal clock battery

Consumption of the battery makes the clock not to work correctly. When the clock is wrong or it has stopped, please replace the battery according to the following procedures.

1. Turn the projector off, and unplug the power cord. Allow the projector to cool sufficiently.
2. After making sure that the projector has cooled adequately, slowly turn over the projector, so that the bottom is facing.
3. Turn the battery cover fully in the direction indicated "**OPEN**" using a coin or the like, and pick the cover up to remove it.
4. Pry up the battery using a flathead screwdriver or the like to take it out. While prying it up, put a finger lightly on the battery since it may pop out of the holder.
5. Replace battery with new **HITACHI MAXELL**, Part No.**CR2032** or **CR2032H**. Slide the battery in under the plastic claw, and push it into the holder until it clicks.
6. Replace the battery cover in place, then turn it in the direction indicated "**CLOSE**" using such as coins, to fix.





The internal clock's time will be reset when the battery is removed. Please reconfigure the time via the menu or a web browser after replacing the battery.
(📖Date/Time Settings in the User's Manual (detailed) - Network Guide)

⚠WARNING

►Always handle the batteries with care and use them only as directed. Battery may explode if mistreated. Do not recharge, disassemble or dispose of in fire.
And also improper use may result in cracking or leakage, which could result in fire, injury and/or pollution of the surrounding environment.
• Be sure to use only the batteries specified.
• Make sure the plus and minus terminals are correctly aligned when loading a battery.
• Keep a battery away from children and pets. If swallowed consult a physician immediately for emergency treatment.
• Do not short circuit or solder a battery.
• Do not allow a battery in a fire or water. Keep batteries in a dark, cool and dry place.
• If you observe battery leakage, wipe out the leakage and then replace a battery. If the leakage adheres to your body or clothes, rinse well with water immediately.
• Obey the local laws on disposing the battery.

Using the CD manual

The other manuals for this product are written into the included CD-ROM titled "User's Manual (detailed)". Before using the CD-ROM, please read the following to ensure the proper use.

System requirements

The system for using the CD-ROM requires the following.

Windows®:	OS: Microsoft® Windows® 98, Windows® 98SE, Windows NT®4.0, Windows Me®, Windows® 2000/Windows®XP, or later
	CPU: Pentium® processor 133MHz / Memory: 32MB or more
Macintosh®:	OS: Mac OS 10.2 or later
	CPU: PowerPC® / Memory: 32MB or more
CD-ROM drive:	4x CD-ROM drive
Display:	256 color / 640x480 dots resolution
Applications:	Microsoft® Internet Explorer®4.0 and Adobe® Acrobat® Reader® 4.0 or later

How to use the CD

1. Insert CD into PC's CD-ROM drive.

Windows®:	In a while, Web browser automatically starts. Start up window comes up.
Macintosh®:	(1) Double-click on the "Projectors" icon appeared on the desktop screen.
	(2) When "main.html" file is clicked, Web browser will start and Initial window will appear.

2. Click the model name of your projector first, and then click language you want from the displayed list. The user's manual (detailed) will open.

⚠CAUTION

►Only use the CD-ROM in a computer CD drive. The CD-ROM is designed for PC use only. NEVER INSERT THE CD-ROM INTO A NON-COMPUTER CD PLAYER! Inserting the CD-ROM into an incompatible CD drive may produce a loud noise, which in turn MAY RESULT IN EAR AND SPEAKER DAMAGE!

►After using CD-ROM, please put it into CD case and keep it. Please keep the CD neither in direct sunlight nor in a high temperature and high humidity environment.

NOTE

• The information in the CD-ROM is subject to change without notice.

• No responsibility is taken for any obstacle and defect to hardware and software of your PC as a result of the use of the CD-ROM.

• All or Any part of the information in the CD-ROM must not be copied, reproduced or republished without notice to our company.

Regulatory notices

About Electro-Magnetic Interference

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

This product may cause interference if used in residential areas. Such use must be avoided unless the user takes special measures to reduce electromagnetic emissions to prevent interference to the reception of radio and television broadcasts.

In Canada

This Class A digital apparatus complies with Canadian ICES-003.

In the US and places where the FCC regulations are applicable

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.
This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to case harmful interference in which case the user will be required to correct the interference at his own expense.

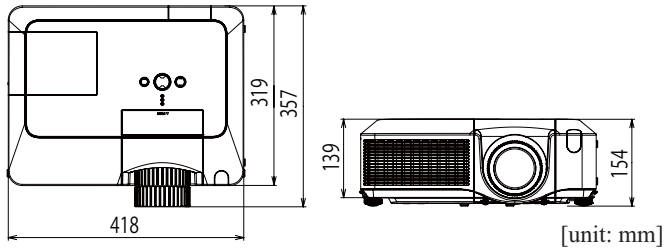
INSTRUCTIONS TO USERS: Some cables have to be used with the core set. Use the accessory cable or a designated type cable for the connection. For cables that have a core only at one end, connect the core to the projector.

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

About Waste Electrical and Electronic Equipment

The mark is in compliance with the Waste Electrical and Electronic Equipment Directive 2002/96/EC (WEEE).
The mark indicates the requirement NOT to dispose the equipment including any spent or discarded batteries or accumulators as unsorted municipal waste, but use the return and collection systems available.
If the batteries or accumulators included with this equipment, display the chemical symbol Hg, Cd, or Pb, then it means that the battery has a heavy metal content of more than 0.0005% Mercury or more than, 0.002% Cadmium, or more than 0.004% Lead.

Specifications

Item	Specifications
Product name	Liquid crystal projector
Liquid Crystal Panel	2,304,000 pixels (1920 horizontal x 1200 vertical)
Lamp	275 W UHB
Audio output	4 W x 2
Power supply	AC 100-120 V / 5.0 A, AC 220-240 V / 2.1 A
Power consumption	460 W
Temperature range	5 ~ 35 °C (Operating)
Weight (mass)	7.3 kg (approx.)
Ports	RGB1 ..... D-sub 15 pin mini x 1 RGB2 G/Y, B/C_B/P_B, R/C_R/P_R, H, V ..... BNC x 5 S-VIDEO ..... mini DIN 4 pin x 1 VIDEO ..... RCA x 1 Y, C_B/P_B, C_R/P_R (component video) ..... RCA x 3 HDMI ..... HDMI x 1 AUDIO IN1 ..... Stereo mini x 1 AUDIO IN2 ..... Stereo mini x 1 AUDIO IN3 R/L ..... RCA x 1 AUDIO IN4 R/L ..... RCA x 1 RGB OUT ..... D-sub 15 pin mini x 1 AUDIO OUT ..... Stereo mini x 1 USB ..... USB (B) x 1 REMOTE CONTROL ..... Stereo mini x 1 CONTROL ..... D-sub 9 pin x 1 LAN ..... RJ45 x 1
Size	418 (W) x 139 (H) x 357 (D) mm (approx.)  [unit: mm]
Optional parts	**Lamp:** DT00873 **Air filter:** MU05661 * For more information, please consult your dealer.

Warranty and after-service

If an abnormal operation (such as smoke, strange odor or excessive sound) should occur, stop using the projector immediately. Otherwise if a problem occurs with the projector, first refer to the "Troubleshooting" of the "Operating Guide" in the CD and run through the suggested checks. If this does not resolve the problem, please consult your dealer or service company. They will tell you what warranty condition is applied.

Please check the following web address where you may find the latest information for this projector.

http://www.hitachi.us/digitalmedia
or
http://www.hitachidigitalmedia.com

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